JOURNAL

OF THE

BENARES HINDU UNIVERSITY

Vol. 6 :
1941-42

Editor

U. C. NAG, M. A., Ph. D. (London)

Associate Editors

PHULDEO SAHAY VARMA, M. Sc., A. I. I. Sc.,
JIVAN SHANKER YAJNIK, M. A.

Assistant to the Editor

SATĪŚA C. GUHA

BENARES

1941-42

INDEX

TO

JOURNAL OF THE B. H. U.

Volume 6 (1941-42)

Volume 6 Number 1

JOURNAL

OF THE

BENARES HINDU UNIVERSITY

Editor

U. C. NAG, M. A., Ph. D. (Lond.)

Associate Editors

PHULDEO SAHAY VARMA, M. Sc., A. I. I. Sc.,

JIVAN SHANKER YAJNIK, M. A.

Assistant to the Editor

SATĪŚA C. GUHA

1941

CONTENTS

THE VIVĀHA SAṀSKĀRA (MARRIAGE CEREMONIES) OF THE HINDUS

RAJ BALĪ PANDEY, M.A., D.Litt.

I

The Vivāha is the most important of all the Hindu Saṁskāras. The Gṛhyasūtras generally begin with it, because it is the origin and centre of all domestic sacrifices. They presuppose that every man, in his normal conditions, is expected to marry and run a home. Even before them, in the Vedic period, to which only a few of the Saṁskāras can be traced back in their ceremonial form, the marriage ceremonies were developed and they have found literary expression in the Ṛgveda[1] and the Atharvaveda.[2] A sweet home, a lady love and fondlings in the house—these were coveted objects for the Vedic Aryans. Therefore marriage received great importance even in early times. When religious consciousness developed, marriage was not only a social necessity but became a religious duty encumbent on every individual. Marriage was regarded as a sacrifice[3] and one who did not enter the married life was called "one without sacrifice," a contemptible term, indeed, for the Vedic Hindus. The Taittirīya Brāhmaṇa says, "He, indeed, is without sacrifice who has got no wife." It again adds,[4] "He is himself a half man, the second half is wife." When the theory of Three Debts[5] evolved, marriage gained even greater importance and sanctity, as it was through marriage

Marriage the origin and centre of all domestic ceremonies.

A natural instinct.

A religious duty.

[1] X. 85.

[2] XIV. 1, 2.

[3] अयज्ञो वा एष योऽपत्नीकः । ii. 2. 2. 6.

[4] अथो अर्द्धो वा एष आत्मनः यत्पत्नी । ibid. ii. 9. 4. 7.

[5] जायमानो वै ब्राह्मणस्त्रिभिर्ऋणवान् जायते ब्रह्मचर्येण ऋषिभ्यो यज्ञेन देवेभ्यः प्रजया पितृभ्यः । तैत्तिरीय संहिता । vi. 3. 10. 5.

that one could pay off one's ancestral debt, by producing children.

During the Upaniṣadic times, the Āśrama theory was established. The advocates of this theory maintained that one should proceed Āśrama by Āśrama that is, a man should first live the life of a student, then he should enter the married life, after this he should lead a retired life and in the last Āśrama he should give up all worldly attachments and become a religious wanderer. The married life was regarded essential for the growth of personality and no tinge of antipathy was attached to it.

Marriage and the Āśrama system.

In the time of the Smṛtis, the Āśrama system was believed to be divinely ordained, and it was thought to be the sacred duty of every person to respect it. From the Gṛhyasūtras and the Dharmasūtras we learn that the number of Naiṣṭhika Brahmacārins was very limited and the majority of young men accepted the life of a householder. The Smṛtis entirely endorse the Āśrama system and emphatically prescribe that a man should marry after his student life. Manu[6] enjoins "Having spent the first fourth part of his life in the house of his guru, the second fourth in his own house with his wife, the third part in forests, one should take Sanyāsa in the fourth part, casting away every worldly tie." Hārīta[7] is of the same opinion: "One who spends his life in the said manner, having conquered all the worlds, attains the world of Brahma." According to Dakṣa,[8] the order of the first three Āśramas cannot be changed: None

[6] चतुर्थमायुयो भागं वसित्वाद्यं गुरो कुले ।
द्वितीयमायुषो भागं कृतदारो गृहे वसेत् ॥
वनेषु च विहृत्यैवं तृतीयं भागमायुषः ।
चतुर्थमायुषो भागं त्यक्त्वा सङ्गान्परिव्रजेत् ॥ Manusmṛti, iv. 1-2.

[7] अनेन विधिना यो हि आश्रमानुपसेवते ।
स सर्वलोकान्निर्जित्य ब्रह्मलोकाय कल्पते ॥ Quoted in the Saṁskāra-Mayūkha, p. 64.

[8] त्रयणामानुलोम्यं स्यात्प्रातिलोम्यं न विद्यते ।
प्रातिलोम्येन यो जाति न तस्मात्पापकत्तरः ॥ Dakṣa-Smṛti, i. 12.

is more sinful than one who trangresses this rule. The Smṛtis highly praise the life of a householder. They call it the best Āśrama and regard it as the centre and prop of the whole social structure. "Just as all creatures exist depending on air, so do all the Āśramas depending on the householder. Because the householder supports the three orders by means of knowledge and food, so his order is the highest. One who longs for imperishable heaven and happiness in this world, should uphold the Gṛhastha Āśrama....[9]" Quite in keeping with these ideas, a man who did not marry was held in low scale. An anonymous quotation by Aparāka on Yājñavalkya[10] says, "O, King, a man, he may be a Brāhmaṇa, a Kṣatriya, a Vaiśya or a Śūdra, who is without a wife, is not fit for religious actions."

Marriage the prop of the social structure.

Non-conformists condemned.

For several reasons marriage was held in high esteem among ancient peoples. Doubtless in rude pastoral, and even agricultural times, economic and social causes were at the basis of this esteem. Large family was a blessing. Marriage was a family affair rather than a personal one ; indeed the generation of offspring was the supreme motive of every union to the end that a man's house or family might not die out. Then religious motives were equally operative in assigning such a great regard to marriage. Worship of ancestors and gods was dependent on progeny, which could be obtained only through marriage. In later developement of Hinduism, the last idea became more prominent than the social and economic ones.

The causes of its importances.

Other ancient peoples also held marriage in high esteem. Among the people of Israel it was respected for the same reasons

[9] यथा वायुं समाश्रित्य वर्तन्ते सर्व जन्तवः ।
तथा गृहस्थमाश्रित्य वर्तन्ते सर्व आश्रमाः । etc. Manu-Smṛti, iii. 77-79.

[10] पत्नी धर्मार्थकामानां कारणं प्रवरं स्मृतम् ।
अपत्नीको नरो भूप कर्मयोग्यो न जायते ॥
ब्राह्मणः क्षत्रियो वाऽपि वैश्यः शूद्रोऽपि वा नृप । I. 51.

human ties. The weakness of the savage female also was not responsible for marriage tie, because she was as strong and capable of self-defence as the male. The source of marriage is to be sought for elsewhere. We can look for it in the utter helplessness of the new-born offspring and the need of both the mother and the young for protection and food during a varying period of time. So it appears that marriage has its source in the family, rather than the family in marriage, and the very roots of the permanent union of the sexes are found in parental duties. It was the natural desire of woman for sufficient protection during the critical period of her confinement and for adequate protection of the child in its helpless state of infancy that drove her to select a permanent companion in life. In this selection she was very cautious, as she fully considered the fitness of the man and arrived at a mutual understanding before she gave herself away to him. The love making and other means of enticement were there that helped in effecting the union. The desire for a son, the protection of wife and children, the need of running a home and the ideal of domestic felicity are duly reflected in the marriage ceremonies.[19]

Evolution of Marriage in India.

Now we have to consider the evolution of marriage in ancient periods of Indian History, though the marriage ceremonies of the Hindus presuppose a monogamous union. The Ṛgvedic society emerges with a well established home which could not have been possible in the pre-marital stage of sexual relation. There is no instance of promiscuity proper in the Vedic literature. The only reference to it is found in the Mahābhārata.[20] There it is stated that women were free in early primitive times and they could have sexual relation with anybody they liked, even though they were married. This revolting custom, however, was abolished by Śvetaketu, son of Uddālaka. This story, at most, proves that the Aryans had passed through a stage

[19] Cf. A. C. Das, Rgvedic Culture, p.

[20] अनावृता: किल पुरास्त्रिय: आसन्वरानने ।
कामाचारविहारिण्य: स्वतन्त्राश्चारुहासिनि ॥ i. 128.

of society when such intercourse was tolerated in society. Temporary sexual relations also are not to be found either in the Vedas or in the Gṛhyasūtras. The marriage as described in them was meant to be regular and permanent. The only instance of marriage by periodical contract is supplied in the story of Urvaśī and Purūravas in the Ṛgveda.[21] This form of marriage, however, was not current in the Ṛgvedic times and must have been a recollection of ancient times when temporary marriages were in vogue.

No Promiscuity proper.

It is a mistake to suppose that sexual relation in the early society was promiscuous. The great anthropologists with their vast and intimate knowledge of primitive culture have arrived at the conclusion that the sexual relation between man and woman in ancient times was not promiscuous. Westermarck remarks: "It is not of course impossible that among some peoples intercourse between the sexes may have been almost promiscuous. But there is not a shred of genuine evidence for the notion that promiscuity even formed a general stage in the history of mankind...... Although polygamy occurs among most existing peoples, and polyandry among some, monogamy is by far the most common form of human marriage. It was so among the ancient peoples of whom we have any direct knowledge. Monogamy is the form which is generally recognised and permitted. The great majority of people are, as a rule, monogamous, and other forms of marriages are usually modified in a monogamous direction."[22] Almost the same observations are made by Howard[23] on the topic. In a progressive society monogamy is the natural and usual form of marriage. Other forms of marriage are degradation or retrogression to the primitive conditions. Promiscuity never creates the home nor engenders those noble sentiments of self-sacrifice and self-denial that have helped to uplift the human race. The Vedic hymns and the Gṛhyasūtras celebrate

21 X. 59.

22 History of Human Marriage, pp. 133-149.

23 History of Matrimonial Institution, pp. 90, 91.

a regular marriage for a life-long companionship. The Hindu Saṁskāras recognize the full-fledged marriage bereft of savage waywardness on the part of man and woman.

II

After we have considered the general state of sexual relation, we have to see how a young man and a young woman were united to lead the life of a householder. The Smṛtis[24] have recognised eight methods through which it was done. These are Brāhma, Daiva, Ārṣa, Prājāpatya, Āsura, Gāndharva, Rākṣasa and Paiśāca. Though many of these methods can be traced back to the Vedic period, they have not been mentioned as such in the pre-sūtra literature. To the majority of the Gṛhyasūtras the eight methods are unknown. The Mānava Gṛhyasūtra[25] refers to the Brāhma and Śulka (Āsura) only. So does the Vārāha. The Aśvalāyana[26] is the only Gṛhyasūtra that mentions all the eight methods. The omission, however, does not mean that these methods were not current before, or even during, the composition of the Gṛhyasūtras. They were, more or less, a social problem beyond the proper scope of the ritual literature. When everything was settled about marriage, the particular rite was required to solemnize it.

Eight methods of contracting Marriage.

The Smṛtis have divided the eight methods into two groups, Praśasta or approved and Apraśasta or disapproved.[27] The first four are Praśasta, the rest are Apraśasta. The first four methods were regarded praiseworthy, among which the first was the best, the fifth and the sixth were tolerated and the last two were forbidden. But all of them were legalized. At present the only

Approved and disapproved methods.

[24] ब्राह्मो दैवस्तथा आर्षः प्राजापत्यस्तथासुरः ।
गान्धर्वो राक्षसश्चैव पैशाचस्त्वष्टमोऽधमः ॥ Manu-Smṛti, iii. 21 ; Yājñavalkya-Smṛti, I. 58-61.

[25] The Manava G.S., i. 7. 12.

[26] The Aśvalāyana G.S., i. 6.

[27] The Manu-Smṛti, iii. 24, 25.

two forms, Brāhma and Āsura are recognized. The more objectionable the method the more primitive it was, though some of them were current side by side. They will be dealt with in their ascending order.

Paiśāca.

The least approved method was Paiśāca.[28] According to it the bridegroom fraudulently got possession of the person of the girl, and it was therefore characterized as the basest of all methods. In the opinion of the Āśvalāyana Gṛhyasūtra, carrying off a girl, who was either sleepy, intoxicated or unconscious was called Paiśāca. Capture of the girl was common with the Rākṣasa method, but unconsciousness on the part of the girl and her guardians gave it a different form. Gautama and Viṣṇu define it as "Cohabiting with a girl who is unconscious, sleepy or intoxicated." Manu[29] defines: "When a man cohabits with a girl in loneliness when she is sleepy, mad or intoxicated, it is called the Paiśāca method." Yājñavalkya calls a marriage Paiśāca when a girl is married through fraud. Devala gives a similar definition. The Paiśāca was the most uncivilized and barbarous method through which marriage could be effected. In it the bride was ravished then and there, a revolting event indeed. It was prevalent in primitive savage tribes, later on very rarely repeated and ultimately disapproved altogether.

Rākṣasa.

The next method in ascending order was Rākṣasa.[30] According to Manu "Capture of a girl by force while she is crying and weeping, having killed, scattered and injured her relatives is called Rākṣasa Vivāha."[31] In this method the bridegroom did not wait for the consent of the father or girl herself, but took her away by force. This method was prevalent in ancient warring tribes and the captive women were enjoyed as war booties. The definition

[28] The Manu-Smṛti, iii. 21.

[29] iii. 34.

[30] The Āśvalāyana G.S., i. 6; the Manu-Smṛti, iii. 21: the Yājñavalkya-Smṛti, I. 61.

[31] The Manu-Smṛti, iii. 33.

given by Manu pictures a scene of battle. Viṣṇu[32] and Yājñavalkya[33] actually say that it arose from war.

In the opinion of some scholars it is the oldest method of marriage, which was prevalent among all the primitive peoples. They see the semblance of the original war in the marriage procession of the present time. They say that this is proved by many procedures adopted in the marriage ceremonies among savage and half-civilized tribes of to-day. For example, in India also, many simulated farces of fights and capture are performed at the time of marriage in the jungle tribes. Among the Gonds the bridegroom pursues the bride who poses to run away before the nuptials. In Bihar, among the Birhols, the bridegroom captures the running bride.

The above view presupposes a regular marriage from outside. It is very doubtful, however, whether any people habitually secured wives from without their tribe. The supposition that conflicts of wedding ceremonials are derived from war is also not well founded and can be explained on other grounds. Most probably the procession is due to the festivity of marriage and the assemblage of people is derived from the custom of marrying relatives which gave certain persons a vested interest in the women of their own community. Moreover, capture cannot be the only original method of securing a wife. Even in the primitive sexual relation, willingness of the parties concerned must have been very common, as it is found in animals also. There is a pre-arranged natural harmony between opposite sexes which unites them without any external force. So, even in the very primitive times, the Gāndharva form of marriage must have been more common than the Rākṣasa one.

The Indo-Aryans, during the Vedic times, were not always warring, and the old savage customs were disappearing from amongst them. The capture of a girl against her wishes was falling into disuse and in the majority of cases the girl was

[32] युद्धहरणेन राक्षसः ।

[33] राक्षसो युद्धहरणादिति ।

carried away with her own consent, though against the consent of her parents. Such kinds of capture were sometimes prearranged by the bride and the bridegroom. Sometimes the lovers came into conflict with their guardians, and the marriage had to be accomplished by capture and elopement, which was regarded as a commendable step for the knight and the lady alike ; thus in the case of Vimada and Purumitra's daughter,[34] it appears that there was no voilence pure and simple, but that the affair was prearranged with the consent of the bride who refused to be directed by her parents. This previous consent is a fact which distinguishes such instances of capture and elopement from the Rākṣasa method of marriage. In the epic instances of Rukmiṇī and Subhadrā also the consent of the bride was obtained.[35]

In course of time, when people became settled, marriage by capture generally disappeared from the society. It continued, however, among the Kṣatriyas, the military caste of India. The simple reason for this is, that it were they who mostly participated in war and obtained wives as war booties. This original war booty grew into a knightly fashion later on. Manu[36] regards the Rākṣasa form the main form commendable for the Kṣatriyas. In the Mahābhārata Bhīṣma also calls it the best form for the ruling caste,[37] and he actually captured wives for the Kuru princes. Hārita[38] calls it the Kṣātra marriage and Devala[39] regards it as a sign of power and prestige. This custom was current up to the Rajput period of Indian History, though in the majority of cases the captured wife was a willing one, for instance, the capture of Saṁyuktā by Pṛthvirāja was prearranged.[40] Subsequent to the twelfth century of the

[34] The Ṛgveda, i. 112. 19 ; 116. 1 ; 117. 20 ; X. 39. 7 ; 65. 12.

[35] The Mahābhārata, viii. 37. 34.

[36] The Manu-Smṛti, iii. 24.

[37] The Mahābhārata, i. 245, 6.

[38] अलंकृतामभिजयत: क्षात्रः ।

[39] वीर्यहेतुः विवाहः सप्तमः समुदाहृतम् ।

[40] The Pṛthvirājarāso.

Christian era this custom disappeared, as the political power of the Rajputs dwindled away and the Hindus became, more and more, an agricultural people.

The next method of obtaining a wife was Gāndharva.[41] According to Āśvalāyana "that form of marriage is called Gāndharva where the pair, having entered a contract, approaches each other." In the the opinion of Gautama and Hārita that form is called Gāndharva where a girl selects her own husband. Manu[42] gives the most com-prehensive definition: "Where the bride and the bridegroom meet each other of their own accord and the meeting is consummated in copulation born of passion, that form is called Gāndharva." In this form, it were not the parents of the girl who settled the marriage, but the bride and the bridegroom arranged it among themselves out of sensual inclination.

Gāndhava.

The Gāndharva form of marriage is as old as, or even older than, the Paiśaca and the Rākṣasa ones, because it is more natural than any other form. In the childhood of humanity, men and women becoming of age must have attracted each other without any force or fraud. In the Ṛgvedic[43] opinions "that 'vadhu' alone was 'bhadra', who, brilliantly attired, herself selected her mate, even in the midst of an assembly." The most usual type of marriage seems to have been that in which the bride and the bridegroom had previously come to enjoy each other's company in their ordinary village life or in various other places of festivals and fairs where their free choice and mutual attachment were generally approved by their kinsmen. A passage in the Atharvadeda[44] shows that parents usually left the daughter free in selection of her lover and directly encouraged her in being forward in love affairs. The mother of the girl thought of the time when the daughter's developed youth (Pativedanaṁ) would win a husband for her. It was a

[41] The Aśvalāyana G.S. i. 6.

[42] The Manu-Smrti, iii. 32.

[43] X. 27. 2.

[44] ii. 36.

smooth and happy sort of affair with nothing scandalous and unnatural with it.[45] In the Atharvadeda there are other references to this form of marriage.[46] At one place in the same work Gandharva husbands are actually mentioned.[47]

This method was called Gāndharva, because it was mostly current in a tribe called Gāndharva, that lived on the slopes of the Himalayas. It was more prevalent among the Kṣattriyas than among any other section of the Hindu community, as they represented the freest element in the society.

According to some authorities[48] this method was praiseworthy, as it proceeded from mutual attraction and love. Kaṇva, the foster father of Śakuntalā says in the Mahābhārata,[49] "the marriage of a desiring woman with a desiring man, though without religious ceremonies, is the best marriage." But in the opinion of the majority of law works it was not regarded so ; on the other hand they discouraged it on religious and moral grounds.[50] It was inferior to the first five forms of marriage, because it was performed without sacred rituals and originated from lust. There was some fear also as regards the stability of the marriage tie. Because cupidity was the determining factor in such a marriage, the relation may or may not be lasting.

It seems that from the time of the Sūtras this form of marriage was falling into disuse. The Gṛhyasūtras[51] speak of "Dattā" or "Prattā", "the given one", whose hand was to be grasped by the husband. In course of time when the sense of property increased, the children were regardeed as possessions and the parents began to exercise greater control over their sons and daughters. Therefore the independence of the bride and the bridegroom in selecting their mates diminished.

45 The Ṛgveda, vi. 80. 6.
46 vi. 8. 6.
47 ibid. iv. 87. 12.
48 The Gautama D.S., ii. 1. 81.
49 iv. 94. 60.
50 Quoted in the Viramitrodaya, Vol. II, p. 857.
51 The Pāraskara G.S., i. 4. 16.

The marriages, in ninety percent of cases, began to be settled by the guardians. The child-marriage system rendered a death blow to the Gāndharva from of marriage, because children have no proper idea of marriage and they cannot exercise their discretion and rights in marriage affairs. Ultimately this form of marriage disappeared from the Hindu society and at present it is not legally recognized.

Āsura.

Then a bit superior to Gāndharva was the Āsura[52] method of marriage. "Where the husband, after having paid money to the relations of the bride and the bride herself, accepts her out of free will, it is called the Āsura type of marriage."[53] The main consideration in this kind of marriage was money and it was, more or less, a purchase. By some writers it is called Mānuṣa or human. There is no doubt that it was a great improvement, in early times on the Paiśāca and the Rākṣasa form of marriages where fraud and force were applied.

In the patriarchal system of family children were regarded as family property and the girls could be given away in marriage for money. We find in the Vedic period that sometimes bargains were struck, and the bride was practically sold for a heavy price.[54] Sometimes, out of greed, girls themselves selected wealthy, though otherwise unfit, husband for money.[55] In one passage a Ṛṣi invokes Aśvins to be generous like a Vijamātṛ.[56] Yaska explains Vijamātṛ as Krîtapati. The Maitrāyaṇî Saṁhitā[57] condemns the faithlessness of a purchased wife.

In the beginning there seems to be no stigma attached to this custom. Later on it became distasteful. From the Mahābhārata[58] we know that Bhiṣma procured wives for some

52 The Āśvalāyana G.S., i. 6.
53 The Manu-Smṛti, iii. 31.
54 The Ṛgveda, i. 109. 2.
55 ibid. X. 27. 12.
56 ibid. X. 109. 2.
57 अनृतं वा एषा करोति या पत्युः क्रीता सती अन्यैः संचरति । i. 10. 11.
58 i. 122-9ff.

Kuru princes by purchase. When he approached Śalya for this purpose, the latter felt the awkwardness of the situation, but had no courage to stop the custom of demanding price for a girl. In the case of royal families however, it was a custom rather than a sale. Bhiṣma admitted that there was no sin in the transaction. But Śalya's hitch in demanding money shows that the public opinion was not in its favour.

In course of time the sale of girls began to savour too much of worldliness with the growing conception of the religious character of marriage, where the bride was regarded a meritorious gift by the father to the bridegroom. The Smṛti-writers describe the Āsura marriage only either as a traditional custom or as a necessary evil. In their free opinion, however, they condemn it and call it a sale in the guise of marriage. Manu says, "The learned father of the girl should not accept even the least amount of price. Accepting the price out of greed, he becomes the seller of children."[59] According to Āpastamba Smrti, "not even a Śūdra should accept money while giving away his daughter. Taking money is a sale in disguise."[60] Not only this much. In the opinion of some writers, "a purchased wife cannot attain the full status of a wife."[61] It is said by Kaśyapa that a woman purchased with money is not entitled to share the worship of gods and Fathers. She should be regarded as a maid servant. More and more sin was being attached to the sale of a daughter. "Those who blinded with greed give their daughters in marriage for money, are sellers of their own selves and the sinners of the first water. They fall into hell and kill the merits of seven previous generations."[62]

But in spite of its unqulified condemnation this custom lingered in India, and is still found, though restricted to very poor families. The presence of this custom in the North-West Frontier

59 iii. 51.

60 ix..; the Manu-Smṛti, ix. 98.

61 The Baudhāyana D.S., i. 11. 20.

62 ibid. i. 11. 21.

is attested by Greek writers.[63] At present in India, in low castes and in some poor families of upper castes also, this custom is followed. But it is not done with a free conscience and attempt is made to hide the sale.

Dowry.

The similar custom of dowry to be offered by the father of the bride to the bridegroom is not to be found in ancient literature of the Hindus. There are, however, some references where the guardians of the girl had to offer dowry to the bridegroom. A daughter who had some physical defects was to be disposed of with money.[64] In the marriage hymn "Vahatu" or dowry is mentioned.[65] In the Atharvaveda a king is cursed that his queen may not fetch dowry for him.[66] In the Aitareya Brāhmaṇa[67] a bargain marriage is called "Paśuvivāha," "animal marriage" but it is not clear as to which party exacted money.

In times when the Āsura and the Ārṣa forms of marriages were common, it was absurd for the bridegroom to demand money from the relatives of the bride. Equity of the time required that the father of the girl should demand her price. But in course of time circumstances changed. In early times advanced maidenhood was tolerated; later on the marriage of a girl became compulsory and pre-puberty marriage came into existence. Now the father of the girl became very anxious to dispose of the girl within a limited time. On religious grounds he wanted to get rid of the girl even with an offer of money which the father of the bridegroom demanded. The religious conception of marriage as a sacrifice also helped the rise of this custom. Dowry was regarded as Dakṣiṇā attending the main gift of a girl, and to this extent it was offered willingly. The right of daughter's inheritance was also instrumental in making this custom rigid in the propertied class of people. In the form

[63] Megasthenes, quoted in Oxford History of India, Vol. I, p. 60.

[64] The Ṛgveda, x. 23. 11.

[65] ibid. x. 85.

[66] न अस्यजाया शतवाही कल्याणी । vii. 12.

[67] The Aitareya Br. I. 16.

of dowry the daughter got her share from the property of her father. In modern times, in the educated circle, education of sons is costly. The father of the boy thinks that the cost of education should be shared by the father of the girl, who reaps all the advantages of his son's education. At present it is felt that the demand of dowry is a great impediment in the selection of a proper bride or bridegroom, and the public opinion is being prepared to do away with the rigidity and absurdity of the dowry system.

Prājāpatya.

Next comes the Prājāpatya[68] method of marriage. According to it the father gave away his daughter to a suitor, on the distinct understanding that they should both perform their civic and religious duties together[69]. The father here obtained some sort of bond from the bridegrom who himself came forward as the suitor for marriages. Āśvalāyana[70] defines it in this way: "That form of marriage where the commandment—You both should perform your duties together—is given. is called the Prājāpatya." Gautama[71] and Manu[72] almost repeat the same words. The very name Prājāpatya suggests that the pair entered the solem bond for discharging their debts to Prajāpati, that is, for procreating and bringing up children. The most practical side of this method is brought out by Devala[73] who regards it "a marriage by fixing conditions." The modern people will regard it the most satisfactory and up-to-date form of marriage, because here the rights of the husband and wife are equally well secured. But according to the Hindu point of view, it is inferior to the first three methods. The reason is that, here, the gift is not free but it is bent low with conditions, which should not have been

68 The Aśvalāyana G.S., i. 6.

69 The Yājñavalkya-Smṛti, I. 60.

70 सह धर्मं चरत इति प्राजापत्य: । i. 6.

71 संयोगमंत्र: प्राजापत्ये सहधर्मं चर्यतामिति ।

72 iii. 30.

73 सहधर्मक्रिया हेतोदानं समयबन्धनात् । Quoted in the Viramitrodaya, Vol. II, p. 851.

according to the religious conception of a gift. This form is still Praśasta or commendable.

This form could not have been current in very early times. Only in the advanced stage of the society, educated men and women would have resorted to it. It also required a free society where there was no seclusion of women, and the bridegroom came forward to ask the hand of the bride. This form declined at the introduction of child-marriage, because for it only grown up parties were eligible, who could understand the implications of the bond they were going to enter. In course of time marriage became a pure gift by the father to the bridegroom and any condition, howsoever prudent it might be, became offending to the religious sense of the Hindus.

The Ārṣa[74] method of marriage excelled the Prājāpatya in order of merit. According to this method the father of the

Ārṣa.

bride received from the bridegroom a pair of kine or two for the uses prescribed by law, e.g., the performance of some sacrifice.[75] Evidently it was not the bride's price, but there was some consideration for the gift, though the father of the bride did not want to make a bargain out of it. Āśvalāyana, Baudhāyana and Āpastamba all agree that when a youth married a girl, after having offered a pair of kine to her father, it was called the Ārṣa form of marriage. A condition, however, was imposed on the offer, in that it was exclusively meant for a sacrifice. Thus it was distinguished from the Āsura. Manu[76] observes, "Where the relatives do not accept price for the girl, it is not a sale; what is taken is only in name." In the opinion of the Vīramitrodaya[71] it was not a price, because its quantity was limited. Moreover, it was given away with the bride herself. This method was called Ārṣa, because it was current mostly in priestly families, as its

[74] The Āśvalāyana G.S., i. 6; the Manu-Smṛti, iii. 29.

[75] The Manu-Smṛti, iii. 29.

[76] iii. 54.

[77] Vol. II, p. 851.

very name suggests. A. C. Das in his Ṛgvedic Culture,[78] however, gives a different interpretation of the word Ārṣa. He writes, "Then there was a form of marriage called Ārṣa, when a daughter was married to a Ṛṣi for his vast knowledge and spiritual culture." But in this way we cannot explain the origin of the custom of demanding a pair of kine. Reverence and demand both would go ill together. With the decline of sacrifices, this method of marriage became out of fashion. Formerly it was a commendable type of marriage, but later on even the nominal acceptance of a pair of kine became repulsive to the idea of Kanyā-dāna. As early as in the time of the Manu-Smrti, the opinion was voiced: "Some prescribe the acceptance of one pair of kine in the Ārṣa Vivāha, but it is improper. It is a sale; it matters little whether one accepts a large sum or a small neo."[79] In course of time the very word "take" on the part of the bride's father was eschewed from the auspices of marriage.

The next form superior to Ārṣa was Daiva.[80] In this form the decorated girl was given away by the father to a priest, who officiated at a sacrifice commenced by him. According to Baudhāyana,[81] the girl was given as a Dakṣiṇā or sacrificial fees. It was called Daiva, because in it the gift was made on the occasion of a Daiva sacrifice. The gift of a maiden in marriage for services rendered is illustrated even in the Vedic literature. But sometimes its bareness was clothed by other elements. Thus in the case of Rathavīti Dālbhya's daughter, Śyāvāśva was at the same time an ardent suitor for the maiden subsequently given to him.[82] Priests very often received from their princely patrons, noble maidens or slave girls for services at sacrifices who were called "Vadhus"[83]:

Daiva.

78 p. 258.
79 The Manu-Smṛti, iii. 53.
80 The Āśvalāyana G.S., i. 6.
81 The Baudhāyana D.S., xi.
82 The Ṛgveda, v. 61. 17-19.
83 ibid.

but this appears to have involved no proper marriage, and is to be regarded as concubinage associated with polygamy developing among rich and powerful classes. This method was mainly prevalent among the upper three classes of the Hindus. People thought it meritorious to give their daughters away in marriage to a priest. Later on, with the merits of sacrifices, this custom also became out of vogue, and it was thought not proper to offer a girl to a priest without considering his other conditions. Moreover, the conception of marriage came to involve that it was not merely a gift but it was the settlement of the girl in life and, therefore, it should be well arranged. This form of marriage was regarded inferior to Brāhma, because, here, the father of the girl took the services of the bridegroom into consideration, whereas in the Brāhma method marriage was a pure gift.

Brāhma.

The purest and the most evolved method of marriage was the Brāhma.[84] It was called so, because it was thought fit for the Brāhmaṇas. In it the girl was given by the father, with such ornaments as he could afford, to a man of character and learning, whom he invited voluntarily and respectfully received, without taking any thing in return.[85] The Smrtis regard it the most honourable type of marriage, as it was free from physical force, carnal appetite, imposition of conditions and lure of money. Here the social decency was fully observed and religious considerations taken into account. In its very nature, this method could not have been very primitive, as it presupposes a long culture of social habits. But this form can be traced back up to the Vedic times. The marriage of Sūryā with Soma, as described in the Ṛgveda, is the prototype of the Brāhma marriage.[86] This form is still current and the most popular in India, though it has been prostituted with the morbid stipulation of dowry.

[84] The Āśvalāyana G.S., i. 6; the Manu-Smṛti, iii. 27; the Yājñavalkya-Smṛti, I, 58.

[85] The Manu-Smṛti, iii. 27.

[86] x. 85.

Other methods.

Besides, there were other forms of marriage of which the scriptures do not take cognizance; for example, marriages by exchange and service, etc. The first of the above is still current in the Hindu society. But only poor parents whose children do not attract the notice of match-makers, arrange the marriages of their sons and daughters by exchange. It is not a voluntary custom but a procedure forced by circumstances. In other respects it resembles Brāhma type of marriage.

Current methods.

At present the only two methods of marriage in use are the Brāhma and the Asura. In the first, the father of the girl gives her away to a person whom he invites for the purpose, without accepting anything from him in any shape. In the second, the father accepts money from the bridegroom as the price of his daughter. It will be noticed that our law-givers do not contemplate a third contingency in which the intending bridegroom may put pressure upon the father of the girl to pay him handsomely for the favour of marrying her, no matter whether his means allows him to do so or not. The present system of fixing dowry and to make it the main consideration in settling the marriage do not seem to have existed in ancient times.

Ceremonies Essential.

Whatever may be the method through which marriage was effected, the religious ceremonies were essential to make it valid.[87] Vasiṣtha and Baudhānyana declare; "Where a damsel is taken by force but is not solemnly married according to the religious rites, she may be duly given in marriage to another, for then she remains a virgin as before."[88] Devala says, "In the forms of marriages, beginning with the Gāndharva, the marital rites have again to be performed in the presence of the fire."[89] In the Gāndharva

[86] नोदकेन विना चार्यं कन्यायाः पतिरुच्यते ।
पाणिग्रहणसंस्कारात् पतित्वं सप्तमे पदे ॥—The Yājñavalkya-Smṛti, I. 76.

[87] Quoted in the Vīramitrodaya, Vol. II, p. 860.

[88] ibid.

marriage, consummation of the union preceded the nuptials. According to Manu[89] rituals should be performed only in the case of a virgin. But the later Smrtis, as cited above, prescribe the rites even after consummation. Manu[90] modifies his previous injunction by emphasizing the need of ritual. It was done so for legalizing the marriage, legitimatizing the children and avoiding the public scandal. Mādhavācārya also realizes the necessity of performing the religious ceremonies in every form of marriage: "It must not be supposed that in these disapproved forms of marriages, beginning with the Gāndharva, the relationship of husband and wife does not arise for the want of the ceremonies of marriage including the taking of seven steps, because although they do not take place at the outset before acceptance, afterwards they are invariably performed."[91]

Supremacy of religion.

The religious idea was supreme in the Hindu life. It was of less consequence how the pair was united, but if once united, the tie should be consecrated and thus union made lasting. The nuptials were supposed to impart sanctity to the marital relation. Hence, it was thought necessary that they should be performed in every case. At present, however, such cases do not arise owing to the custom of child-marriage and Purdah system. Only in low-caste peoples rare cases of irregular marriage are noticed.

(*To be continued*)

89 ibid.
90 ibid.
91 Quoted by P. N. Sen, Hindu Jurisprudence, p. 270.

DISEASES OF DOMESTICATED ANIMALS DUE TO HELMINTH PARASITES IN INDIA

DR. G. S. THAPAR, Ph.D.,

The term "helminthes," though having no exact meaning in Zoological classification, was originally used by Hippocrates for some worms, with characteristic shapes and movements, found in the intestine of man and this term has been retained ever since merely as a convenient term in Medical and Veterinary literature. Though there are many references to helminths in the ancient Indian, Egyptian, and Semitic literature, modern Parasitology saw its origin in the work of Sir Patrick Manson and his disciples in England and in Theobold Smith and his colleagues in America. To these names must be added that of Sir William Osler, who was not only one of the greatest pioneers in modern medicine but was also a pioneer in Parasitology. He was the founder of the Animal Diseases Research Laboratory of the Dominion of Canada at Hull, and was the first to recognise the value of co-operation and co-ordination between Human and Veterinary medicines. A few years ago, Prof. Leiper suggested a further co-ordination between various departments of the Government and particularly advocated, during his Bilharzia mission in Egypt, for the appointment of trained Zoologists in the irrigation and agricultural departments of a country. He took an active part in Veterinary and Agricultural research and was mainly responsible for the creation of the present Institute of Agricultural Parasitology at St. Albans, of which he himself is the first Director. We owe a very great debt to him for his unfailing activities in the development of helminthological research on modern lines in the Empire.

Owing to the close association of man and domestic animals since times immemorial, there are helminth parasites that occur common to both man and animals. Cases are known of the parasites of lower animals that accidentally attack man. It is therefore, difficult in the the study of helminth parasites

of animals to neglect the study of human parasites. But, in my present discourse, I shall confine only to the helminth parasites of domestic animals and for this I have selected a few important examples of diseases in animals coused by helminth parasites which will show you the seriousness of this menance to animals in this country.

Perhaps one of the commonest diseases, particularly in the hills, which causes considerable loss is the Liver-rot disease in Sheep and Cattle, caused by a helminth (Trematode), *Fasciola hepatica,* commonly known as the Liver-fluke. The presence of the adult worms in the bile-ducts gives rise to pathological symptoms, causing obstruction of the biliary passages, irritation of the biliary epithelium resulting in its hypertrophy and the deposition of sclerified connective tissue in concentric rings around the biliary ducts. The gradual absorption of the toxins by the system and the invasion of ulcerated areas by bacteria cause toxic and bacteriferous condition. Pressure causes the atrophy of the hepatic cells and the portal vessels, resulting in partial or complete cirrhosis. The usual symptoms are increasing weakness and emaciation associated with marked constipation and anaemia.

Another disease, nasal granuloma, commonly known as the 'Snoring Disease' of cattle, is caused by one of the blood-flukes, *Schistosoma spindalis.* It is a peculiar chronic disease of the nostrils of the cattle and in certain areas affects a large number of animals and causes considerable loss to the agriculturist.. The disease is common in India, particularly in Assam, Bengal, Bihar, Orissa, Bombay, C. P., Madras, and certain parts of U. P. Beginning of the disease is indicated by a constant running of the nostrils, associated with noisy breathing and occasional sneezing, but, at this stage, there is no indication of ill-health. With the progress of the disease, the character of the nasal discharge varies, being either thin serous, thick mucous, or even bloody. The lesions of the disease first make their appearance at the alar margin of the nose and gradually extend inwards. At the final stage it shows a mulberry-like outgrowth

on the mucosa of the lateral walls of nasal chamber in its anterior third. Apart from the changes in the nasal tissue, the blood vessels also show marked lesions in the form of varying stages of endarteritis, the lumen of some of them being completely obliterated.

Hump-sore is a skin disease appearing in the form of a localised sore in the region of the hump. In rare cases the lesions are found situated at the yoke-place, flat of the neck and over the region in front of the anterior margin of the scapula. No disturbance, however, is noticeable in the system, but the condition assumes distressing features at times, owing to the continuous attacks by flies which deposit their eggs on the sores setting up a condition of myiasis. The lesion starts in the form of multiple infiltrations in the dermis of the hump and causes painful irritation. The animal begins to rub the part against the trunk of a tree or wall with the result that they break up and coalesce to involve a bigger area of the skin. The lesions become ulcerative by repeated acts of rubbing and this constitutes the first observable form of the disease, which is very common in the bovines of Assam, Bengal, Bihar and Orissa, so much so that scarcely any cattle head is free from it. As a result of examination of the smears of blood from this region, the presence of microfilariae resembling those found in the saliva of the common crow, were observed in the sores. The sores are quiescent during the winter months but assume activity during the rains and this condition persists throughout the rest of the life of the animal.

Another example of a similar nature is the disease known as *Bovine Haematuria*. This has been a serious scourage in cattle in many countries. In India it is common in the mountainous and submountainous districts of Bengal, and U. P. and in the Nilgiris in the Madras Presidency, between the altitudes of 4000-4500 ft. above the sea level. The most noticeable symptom is the passing of blood with urine. The disease is characterised by a slow and progressive course with frequent intermissions of variable duration extending from a few weeks

to months. This ultimately results in extreme anaemia and debility or even to other complications like internal haemorrhage in the bladder, hydronephrosis, uraemic poisoning, etc. The cause of infection has been variously attributed to some protozoa, Fungi and helminthic ova but none of them appear to have been conclusively proved. Recently some preliminary observations were made by us but they gave no conclusive proof. However I am led to the belief that the possibility of helminthic infection in the disease cannot be altogether ignored.

The nematode parasites at various stages of their development are known to set up serious pathological conditions in the lungs of their host. Thus the lung-worm, *Aleurostrongylus abstrusus* causes Pseudo-tuberculosis in cats. Here although the adult worms do not appear to cause damage, the eggs scattered through the lungs, provoke cellular reaction. Their presence in the finer branches of the artery, causes thrombosis and a catarrahal reaction in the adjacent alveoli. In case of a heavy infection, excessive production of eggs at a time results in pneumonia which is mostly fatal. Recent investigations on the helminths of goat indicate the presence of *Verastrongylus pneumonicus* in the lungs. These parasites set up symptoms in the goat similar to those described for cats above and cause the disease known as goat pneumonia. Similarly, *Dictyocaulus filariae* is responsible for this disease in sheep.

The nematodes are also known to produce nodules and tumours in the alimentary canal of animals. This is extremely common in the case of *Oesophagostomum columbianum*, which lives as adult attached to the intestinal wall and causes ulcerations at the seat of attachment of the worm. But its parasitic larvae develop in the mucosa and have a considerable pathogenecity producing nodules on the intestinal wall, which eventually becomes contaminated by Bacteria and thus a simple helminth nodule becomes converted into a pyogenic abscess. This septic infection often spreads, rendering the condition of the host more serious than that initially produced by the adult worms.

Haemonchus contortus, another nematode, causes haemorrhage in the abomasum by ingesting blood of the host. This results in the gradual loss of the blood and as a consequence the blood becomes poorer and the blood picture at this stage closely resembles that of pernicious anaemia. A disturbance in the fatty metabolism produces mortification in bones and the central veins, and deposit of fatty substances and crystals in the liver.

"Barsati" is a disease that should also attract our attention, on account of the chronic inflammation of the skin and subcutaneous tissue in horses. It is of common occurrence in the Northern parts of India but occasional cases have also been reported from the Madras Presidency. In its initial stage, a cutaneous enlargement of unusual size is noticed, followed by loss of hair. The enlargement is in reality due to deep-seated lesions which gradually approach the surface. The sore is smooth but as granulations start, an irregular worm-eaten picture is presented. The degenerative lesion is active at more than one focus, the healing of the first sore being followed by the appearance of fresh ones at the same site or elsewhere. It has, however, been found that the internal organs, like the lungs, are sometimes affected with lesions of Barsati. Apart from the local lesions, there is scarcely any disturbance and it does not much impair the health of the animal until the disease has assumed a very extensive form or has affected the male or female generative organ, the seat of saddle or the angle of the mouth. The disease is due to the infection by the larvae of the horse nematode, *Habronema muscae*, through the agency of flies.

The Cestodes generally, with a few exceptions of the cystic stages, do not cause any serious disturbances beyond the appearance of common symptoms of weakness, emaciation, resulting in acute anaemia. In this connection we might consider the disease commonly known as hydatid disease caused by the cystic stage of the dog tapeworm, *Echinococcus granulosus*. The cystic stage is found practically in every tissue of the body of sheep and cattle, but liver and lungs are the most common sites

of infection. Each cyst consists of a single chamber full of a fluid in which the Scolices or heads are found floating like fine particles of "sand." Sometimes, the heads arise in bunches from the wall of the cysts and these are then known as Coenurus. In extreme cases of liver infection a huge hony-comb-like structure makes its appearance, each chamber containing these "sands" or scolices floating in the fluid. They are known as *multiloculate* cysts. The grave meance of this disease lies in the fact that man, through neglect of precautions, may become infected and this is caused by swallowing during play the eggs ordinarily clinging to the hair of dogs. These eggs, on entering the body, bore their way to liver, brain, etc., where they grow into large bladders, called hydatids and cause serious illness. Thus, association with dog may be a source of danger both to man and animals. This is one of the many cases of helminthic infections that are common to man and animals.

These are a few instances of helminthic infection to show the grave menace to the health of animals. We may now briefly discuss the possibilities of their elimination. Helminthic diseases in man have, owing to the introduction of the principles of Hygiene and Sanitary Science, been practically eliminated from temperate countries; but these sciences have scarecely touched the domesticated animals, with the result that parasitic worms continue to be highly important factors in the health of the animal community. By its very nature, Veterinary helminthology is much more complicated than human helminthology. Animals live in an environment more than favourable for the parasites. Their food is uncooked, their skins are hairy and dirty and they continually contaminate their food with their own droppings. The situation is, in reality, becoming worse day by day, as with the progress of agriculture and the gradual utilisation of land for human habitation, the animals are being kept in a limited area for grazing purposes and this further helps in the increased infection by parasitic worms. Under natural conditions, ground is lightly stocked with scrub animals, but under such artificial conditions, land is becoming

heavily stocked with breed animals. Besides, we support millions of animals in Pinjrapoles and gau-shallas, a large majority of which are not only useless but are actually a great source in the spread of helminthic infection in animals. These cause disturbance of nature and greatly facilitate the spread of helminthic infections. Owing to our incomplete survey, it is difficult at this stage to estimate the cost of the damage due to this disturbance to animal industry in India but in countries where systematic investigations have been carried out the loss appears to be enormous. The common liver-fluke infection alone, for instance, costs a million pounds yearly to Great Britain and there are still heavier penalties due to intestinal hook-worms and the like in sheep and cattle. Approximately 10% of sheep die yearly from worm infestation, but the loss is not confined to death alone. There is, also condemnation of food offal in the meat market, lowered productions of meat and milk, all of which are attributed to the common symptoms of helminthiasis—a condition that results in prolonged and progressive weakness, anaemia and sluggishness, gradually resulting in death. It would be merely under-estimating the situation if we were to say that over hundred millions of rupees are lost to this country yearly through the agency of helminth parasites of stock animals.

Some of this loss is, however, preventable and we are certain that much more could be done if we had fuller information about the various species infecting the animals. There are at present about one thousand species parasitising domestic animals in various parts of the world, and most of our knowledge of these helminths is very recent. We know little of their distribution and practically nothing about their effects on the host. In 95% of the cases we do not know even the outline of their life cycle and we have only superficial knowledge of therapeutic measures. Research is too often uncontrolled and the workers are too few to make any progress. The technique for helminth examination is too little understood and even trained pathologists only see the grosser forms. But even with

our present poor knowledge much could be done to reduce losses in stock, if only the stock owners would co-operate.

The general lines on which prophylactic measures could be adopted may now be mentioned. In the first place there could be the destruction of adult worms in situ. This is both preventive as well as curative and for this we use certain drugs called anthelmintics. These drugs are used to remove or destroy the worms in the body of their hosts, and are only selective and effective for certain species of the parasites. It must, however, be noted that anthelmintics are all poisons and should only be given under expert advice.

Proper disposal of manure would eliminate a great majority of helminths and this can be done variously by burning it, or by spreading it in fields used for crops or by storing it until its own heat destroys the eggs.

Again housing of animals until the dew is off the grass, and draining of pastures would also help in the elimination of the helminths. Burning long grass would kill many larvae that climb up grass in damp weather. Horses and sheep each will eat up larvae of the parasites of the other. Therefore the use of intergrazing system of animals would be a practical application for the elimination of the parasites. Rotation of pastures and stock and the elimination of intermediate hosts are also practical suggestions for the prevention of further infection.

It may be noted here that one of the chief difficulties in the elimination of helminthic infection is due to the Reservoir hosts. The helminths of domestic animals are also found in wild animals. Thus *Syngamus* in wild birds, liver fluke in rabbit and deer, and *Echinococcus* in fox are some of the examples of such occurrence. Accordingly no parasitic survey of a district can afford to neglect wild hosts and preventive measures must take cognisance of their presence.

As already indicated elsewhere the situation is serious and is becoming more serious year after year. More and better

research is urgently required. No Zoologist can pass through his professional life without meeting helminths over and over again in his laboratory studies. Helminthology postulates a general Zoological training but as I indicated in my Presidential address before the Zoology section of the Indian Science Congress at Hyderabad in 1937, the young student unfortunately gets an introduction to helminthology in his early zoological classes in such a way that it effectively puts him off the subject for the remainder of his life. The subject is uninterestingly presented and inaccurately taught—in fact it is always represented to him that helminthology is a specialised medical curriculum. The types chosen are unsuitable and very often inaccessible to the student, except, perhaps, from prepared slides of foreign manufacture. Helminthology should, therefore, be introduced into the Zoological curriculum only as an introduction to a group largely responsible for the Phenomenon of Parasitism, with a few "generalised simple types." Thus treated, the subject would excite the interest of the student and once his interest is excited, we can then discuss the subsequent qualifications desirable for undertaking helminthological research.

I have only attempted to discuss in a general way the seriousness of helminthic infections in animals, and, with our present knowledge of the subject, the measures we can possibly adopt to cope with the situation. There is no doubt that helminthiasis is a most serious menace to the health of the animals for which man is greatly responsible. We have disturbed the balance of nature and we are only just beginning to realize that we cannot do this with impunity. We may, however, look forward with confidence to the achievement of better results in the future.

REMARKS ON ROLLE'S THEOREM

By V. S. HUZURBAZAR, B.A. (Hons)

The celebrated Rolle's theorem, a statement of which may be found in any standard book[1] on differential calculus, can be extended to the case when $f(x)$ is not continuous at the end-points, and also to the case when the derivative exists but not necessarily uniquely in the open interval (a,b). The following notation will be used for convenience :

$$f(a+0) = \underset{x\to a+0}{lt} f(x)\ ;\quad f(b-0) = \underset{x\to b-0}{lt} f(x)$$

The ratio $\dfrac{f(b-0)-f(a+0)}{b-a}$ will be denoted by $m(b,\ a)$.

$f'_{\mathrm{R}}(x)=$ the right-hand derivative at x.

$f'_{\mathrm{L}}(x)=$ the left-hand derivative at x.

If $f'_{\mathrm{L}}(x)=f'_{\mathrm{R}}(x)$, $f(x)$ is said to have a unique differential coefficient at x, and it is denoted by $f'(x)$.

The phrase, "$f'_{\mathrm{L}}(x)$ and $f'_{\mathrm{R}}(x)$ exist" will mean each of them exists and is either finite or infinite.

To follow the argument it is necessary to consider a lemma first.

Lemma : If (i) $f'_{\mathrm{L}}(x)$ and $f'_{\mathrm{R}}(x)$ exist at every point in the open interval (a,b), and both have the same sign at every such point where they are distinct (the case when one of the two is zero and the other not zero being excluded), and (ii) $f(x)$ has a maximum (or a minimum) at $x=\xi$, $a<\xi<b$, then $f'(\xi)=0$.

Proof : Since $f(\xi)$ is a maximum, we have when h is positive and sufficiently small,

$$\frac{f(\xi+h)-f(\xi)}{h}<0,$$

and $\dfrac{f(\xi-h)-f(\xi)}{-h}>0.$

[1] For instance, "The theory of functions of real variables," Vol. I (1905), by Pierpont.

Proceeding to the limit as $h \to 0$,

$f'_R(\xi) < 0$ and $f'_L(\xi) \geq 0$.

But since these two derivatives have to be of the same sign, we must have, $f'_R(\xi) = 0 = f'_L(\xi)$

$$\therefore \; f'(\xi) = 0.$$

The proof is similar when $f(\xi)$ is a minimum.

Extension of Rolle's Theorem, case I :—If (i) $f(x)$ is continuous in the open interval (a,b) and also satisfies the first condition of the lemma, (ii) $f(a+0)$ and $f(b-0)$ exist, are finite and equal,

then $f'(\xi) = 0$, $a < \xi < b$.

Consider the function $F(x)$ defined as,

$F(x) = f(x), \quad a < x < b$;

$F(a) = f(a+0)$,

and $F(b) = f(b-0)$.

Then $F(x)$ is continuous in the closed range (a,b) and $F(a) = F(b)$. Further $F(x)$ satisfies the first condition of the lemma. Excluding the trivial case in which $F(x)$ is constant throughout (a,b), we see that at least one of the two bounds of $F(x)$ must be attained at $x = \xi$, $a < \xi < b$.

Then by the lemma, $F'(\xi) = 0$

i.e. $f'(\xi) = 0$, $a < \xi < b$.

Corollary : If (i) $f(x)$ is continuous in the open interval (a,b), (ii) $f(a+0)$ and $f(b-0)$ exist and are finite, (iii) $F'_L(x)$ and $f'_R(x)$ exist at every point in the open interval (a,b), and at every such point where they are distinct both the expressions $f'_L(x) - m(b,a)$, $f'_R(x) - m(b,a)$ have the same sign,

then $m(b,a) = f'(\xi)$, $a < \xi < b$.

Consider $F(x) \equiv f(x) - m(b,a)x$

i.e. $F(x) \equiv f(x) - \dfrac{f(b-0) - f(a+0)}{b-a} x$

It is easily seen that,

$$F(a+0) = \frac{bf(a+0) - af(b-0)}{b-a} = F(b-0)$$

further,

$$F'_L(x) = f'_L(x) - m(b,a), \quad a < x < b$$
$$F'_R(x) = f'_R(x) - m(b,a), \quad a < x < b.$$

$\therefore$ $F'_L(x)$ and $F'_R(x)$ have the same sign.

$\therefore$ By Case I, $F'(\xi)=0$, $a<\xi<b$

i.e. $f'_L(\xi) - m(b-a) = 0 \mp f'_R(\xi) - m(b,a)$

$\therefore$ $m(b,a) = f'(\xi)$, $a < \xi < b$.

The following examples illustrate the advantage of Case I over the usual Rolle's theorem.

Ex. (1) $f(x)$ is defined by,

$$f(0)=0,$$
$$f(x)=x^x,\ 0<x<1$$

and $f(1)=2$.

In the interval (0,1) $f(x)$ is discontinuous at the end-points.

But $f(+0)=1=f(1-0)$

$\therefore$ $f'(\xi)=0$, $0<\xi<1$.

As a matter of fact, $\xi = \dfrac{1}{e}$.

Ex. (2) Let

$$f(x) = 4x - x^2 \quad, x<3$$
$$\text{,,} \quad = 3 \quad, x=3$$
$$\text{,,} \quad = -3x+12,\ x>3.$$

Here $f(x)$ is continuous in the closed range (0,4) and $f(0)= 0=f(4)$. But at $x=3$ the derivative is not unique so that we cannot apply the usual Rolle's theorem.

But $f'_L(3) = -2$ and $f'_R(3) = -3$

Since both have the same sign,

$$f'(\xi)=0,\ 0<\xi<4$$

we see that $\xi=2$.

Ex. (3)

$$f(x)=x^2,\ 0 \leq x<1$$
$$\text{,,} \quad =1\ ,\ x=1$$
$$\text{,,} \quad = \tfrac{1}{2}(5x-3),\ 1<x \leq 2.$$

$f(x)$ is continuous in the closed range (0,2) and it has a unique derivative except at $x=1$.

$$m(2,0) = \tfrac{7}{4}$$

$$\left.\begin{array}{l} f'_{L}(1) - \tfrac{7}{4} = 2 - \tfrac{7}{4} = \tfrac{1}{4} \\ f'_{R}(1) - \tfrac{7}{4} = \tfrac{5}{2} - \tfrac{7}{4} = \tfrac{3}{4} \end{array}\right\}.$$

Since the above two expressions have the same sign, we have by Cor. Case I,

$$f'(\xi) = \tfrac{7}{4},\ 0 < \xi < 2.$$

It will be seen that $\xi = \frac{7}{8}$

Case II: If (i) $f(x)$ is continuous in the open interval (a,b) and also satisfies the first condition of the lemma, (ii) $f(a+0)$ and $f(b-0)$ are infinities of the same sign, then $f'(\xi) = 0,\ a < \xi < b$.

To be definite let both limits be positive infinities.

$$f(a+0) = +\infty, \text{ and therefore } \lim_{\delta_1 \to 0} f(a+\delta_1) = +\infty;$$

also $f(b-0) = +\infty$, and therefore $\lim_{\delta_2 \to 0} f(b-\delta_2) = +\infty$

Given N however large, we must have,

$$f(a+\delta_1) > N,\ \delta_1 < e_1$$
$$\text{and } f(b-\delta_2) > N,\ \delta_2 < e_2.$$

In particular,

$$\left.\begin{array}{l} f(a+e_1) > N \\ \text{and } f(b-e_2) > N \end{array}\right\}. \qquad \text{(A)}$$

Now take one fixed x_1 such that $a+e_1 < x_1 < b-e_2$, and choose $N = f(x_1)$. Then in the closed interval $(a+e_1,\ b-e_2)$ $f(x)$ is a continuous function of x and further the inequalities (A) show that neither of $f(a+e_1)$ and $f(b-e_2)$ can be the lower bound of $f(x)$ in this interval, since each is greater than $f(x_1)$. If $f(\xi)$ be the lower bound, then by the lemma,

$$f'(\xi) = 0, \quad a+e_1 < \xi < b-e_2$$
$$\text{i.e. } a < \xi < b.$$

The proof when $f(a+0)$ and $f(b-0)$ are negative infinities is on similar lines.

Corollary (1): If (i) $f(x)$ is continuous in the open interval (a,b), (ii) $f(a+0)$ and $f(b-0)$ are infinities of the same sign, and (iii) $f'_{L}(x)$ and $f'_{R}(x)$ exist at every point in the open interval

(a,b), but at every such point where they are distinct there exists a fixed number A such that $f'_L(x) - A$ and $f'_R(x) - A$ have the same sign,

$$\text{then } f'(\xi) = A, \; a < \xi < b.$$

The proof is similar to that of the corollary of case I. The function $f(x) - Ax$ satisfies all the conditions of the case II and so the result follows.

Corollary (2) : If (i) $f(x)$ is continuous and differentiable (uniquely) in the open interval (a,b) and (ii) $f(a+0)$, $f(b-0)$ are infinities of the same sign, then $f'(\xi) = A$, where A is any number whatsoever.

This follows at once from Cor. (1)

EXAMPLES :—

(1) Let
$$f(x) = \frac{1}{x} + x, \; x < 2$$
$$= \tfrac{5}{2}, \quad x = 2$$
$$= \frac{5}{2(3-x)}, \; x > 2.$$

Consider the interval $(0,3)$;
here $f(+0) = +\infty$ and $f(3-0) = +\infty$.
$f(x)$ is continuous in the open interval $(0,3)$ and $f'(x)$ exists uniquely, except at $x=2$.

$$f'_L(2) = \tfrac{3}{4}$$
$$\text{and } f'_R(2) = \tfrac{5}{2}.$$

Since both have the same sign, we have by case II,

$$f'(\xi) = 0, \; 0 < \xi < 3$$

We find that $\xi = 1$

Ex. (2) $f(x) = \dfrac{1}{x-1} + \dfrac{2}{2-x}$.

In the interval $(1,2)$ $f(x)$ satisfies all the requirements of Cor. (2) of case II. It is seen that $f'(x)$ vanishes when $x = \sqrt{2}$

The biquadratic $f'(x) - A = 0$ has also one root lying between $(1,2)$ for all values of A.

Ex. (3) $f(x) = \tan x + \frac{1}{x}$;

here $f(+0) = +\infty$, $f(\pi/2 - 0) = +\infty$

$f(x)$ satisfies all the conditions of cor. (2).

$\therefore$ the equation $\sec^2 x - \frac{1}{x^2} - A = 0$ has at least one root between $(0, \frac{\pi}{2})$ for all values of A.

The case when $f(x)$ has a discontinuity of the second kind (oscillatory) at either of the end-points has been considered by E. W. Hobson (Functions of a real variable, Vol. I, 1927; Art 266).*

Note: This paper is written by a student who is due to appear for the M. A. with Mathematics in 1942. It is gratifying to the teacher to find a young mind that can think logically and coherently on original lines as the present author does.

V. V. N.

April, 10, 1941.

* When this paper was almost completed Prof. S. Sastri kindly brought to my notice W. H. Young's paper " On Derivates and the Theorem of the Mean " (Quarterly Journal of Mathematics, vol. 40). Though that paper treats Rolle's theorem under less stringent conditions it is believed that the cases considered here are not fully covered by it—V. S. H.

REVIEWS

Differential Equations by G. S. DIWAN and D. S. AGASHE, published by Prof. D. S. Agashe, St. Xavier's College, Bombay; 1941.

Differential Eequations is not just a farrago of mechanical substitutions and clever transformations which interest the mathemetical physicist. The subject has its rigour and its subtle points of logic which gladden the soul of the pure mathematician. The authors of this admirable book on differential equations deserve to be congratulated upon the success that they have attained, within the limitations prescribed by themselves, in doing justice to the two aspects of the subject. I do not know of another book on differential equations by an Indian author, at least, of this standard and size. "Diwan and Agashe" should find a place of honour on the Honours' book-shelf of every full-fledged mathematics department in the country. It is to be hoped that the authors will plan out a companion volume dealing with the more intricate types of differential equations with the same lucidity and throughness.

11-8-41. V. V. N.

Saberā, *Saṅgharṣa* and *Garjana* of the *Mānavataraṅgiṇī* series (Hindi) by BHAGWAT SARAN UPADHYAYA, Crown 8vo., Red 30/8 pages (*Saberā*) 170, (*Sangharṣa*) 190, (*Garjana*) 176 ; Published by Srarsvati Mandira, Jatanbar, Benares ; Price Rs. 1/8 each.

The writing of historical fiction is like running a handicap race. From the very beginning the author agrees to work under grave limitations. The outlines of his art are predetermined for him and he cannot put aside or substantially change the recorded course of events for fear of being charged of infidelity to facts. He has a difficult task. Even the

man in the street seems to be too proud of his little stock of historial knowledge and only too prone to raise the horrified cry of 'anachronism!' as soon as he comes across something that does not fit in with the scheme of things made familiar to him by his teacher in early childhood. The author, if he is at all discreet, dare not disregard the taste of such a multitudinous body of patrons. On the other hand, a mere faithful narration of arid facts would satisfy none, save, perhaps, those who have dedicated themselves to the acquiring of dull erudition. The very purpose of the art of the story-teller is defeated if he provides nothing more than a few facts and a few names. What is needed is that within the limits set for him, he should so arrange the available historical material as to create organic unity in it. He should then fill in details and supply flesh and form to the bare skeleton of his story. Here, as in most other things pertaining to art, imagination plays a very important part. By its magic it transmutes a chain of bare events into a story that enraptures us by its fine depiction of human thoughts and feelings as also by its display of the comic, the tragic, or the pathetic in human life. The writer of historical fiction has thus to steer clear on the one hand of too much license in handling historical facts and on the other of too much servility to these facts. Like a clever alchemist he has to combine fact with fiction in a correct proportion in order to prepare the desired amalgum.

These remarks lead us to the consideration of the three volumes of Pandit Bhagwat Saran Upadhyaya's historical short stories which have been recently published. To many these volumes will come as an agreeable surprise as nothing in this *genre* had been so well done in Hindi so far. Pandit Upadhyaya's knowledge of ancient history is amazingly thorough and his imagination remarkably keen. That, perhaps, accounts for the almost unqualified success which he has attained in the writing of these stories depicting through the medium of art the history of the human race from the earliest beginnings.

The stories compiled in the first volume, entitled *Saberā* seek to give a picture of the conditions that prevailed during the pre-Vedic and Vedic periods of Indian history. The crude life and the elemental tumult of passions of the primitive man and woman have been successfully depicted in the first story. The story *Vikramorvaśīya* gives a vivid idea of the very heaven of beauty and ease, love and romance, in which the gods, the demigods, and the kings of the Vedic Aryans were sometimes supposed to reside. The second volume, *Saṅgharṣa,* which deals with the four centuries between the 7th century B. C. and the 4th century B. C., contains some really fine stories. To name only one of them, *Vilāsī* gives an excellent elevation of the character of *Udayana,* that lover *par excellence* of the ancient world. The episode of the birds living in Udayana's prison-cell lends a touch of haunting pathos to a story that develops and closes in an atmosphere of voluptuousness. The stories of the third series contained in the volume *Garjana* deal with the period that falls between the 3rd century B. C. and the 2nd century A. D. During this period the Indian political and social life felt the impact of a number of foreign influences. The very first story, which gives its name to the volume, points unmistakably to the clash and ultimate admixture of divergent cultures. The sea with its constant, upheaval and roar becomes in this piece as much a symbol of tragic fate as in Synge's *Riders to the Sea.*

The language of the book, though heavily Sanskritized, has a flow and rythm of its own. It acquires a special charm in desciptive passages. The printing of the books is correct and neat and the get up attractive.

R. A. DVIVEDI

ULYSSES

C. L. Holden, M.A.

James Joyce's novel *Ulysses* has been acclaimed by more than one person as the most significant work in English, of the twentieth century. The statement is often repeated without much intelligent understanding, and its significance is blurred in the fog of ideas and impressions associated with the fact that it was proscribed in England and America. It has been condemned as loudly, as furiously, and as unintelligently as it has been praised. We propose in this essay to examine the book, to show it for what it is regardless of praise or blame.

His earlier novel *A Portrait of the Artist as a Young Man* is of special interest as an introduction to *Ulysses.* This is a brilliant and sympathetic study of the growth of a young man intellectually and morally, in that sweet and pure and clear English of which only the great Anglo-Irish writers like Swift and Shaw seem capable. There is no doubt as to the artistic merit of this novel. It is written with patent sincerity, and is unsurpassed in its portrayal of the tortures and doubts of adolescence with regard to the great problems of religion and sex. The character of Stephen Dedalus, the central figure of the book, is delicately drawn. A sensitive timid youth, brought up amidst a squalid home atmosphere, reared by Jesuits and Catholic priests, he reaches out thirstily, as knowledge and culture come to him, for the world of beauty and freedom enshrined in the poetry and philosophy of Greece. In his character we see depicted in miniature some of the tortures of soul which possessed Europe during the period of the Renaissance. There is the same loathing of medieval darkness and restraint and ideals, the same striving for the apparently cleaner fresher world of the classical Greeks. For a study parallel to that of Stephen Dedalus in literature there is only Julien Sorel in *Le Rouge et le Noir* by Stendhal. Both reveal the pettiness

of provincial life—even Paris, Dublin, and London are provincial, that is, insufferably vulgar and heartless. Both show the reaction of a sensitive modern mind to the claims of Catholicism.

Ulysses is a continuation of *A Portrait of the Artist as a Young Man.* Stephen Dedalus again appears, if not the central character this time, he is the second major character. The background is the same. It is Dublin in all its physical vulgarity, with the half-emotional, half-intellectual, and sometimes pathetic enthusiasms of its citizens. The book is Celtic in spirit and a revelation of the inconsequential Celtic mind, living in the mud, gazing at the stars, dreaming of heaven, and then with a sudden change, a prey to some gross physical passion. Unlike the earlier novel *Ulysses* is full of peculiarities. It is very much longer than the first novel, but covers far less in time. *Ulysses* is but a day in the life of Stephen, whereas the other novel covers some twenty years. *Ulysses* is written with all those strangenesses of style and grammar which have made Joyce notorious. *A Portrait* is written in classically pure English. The first novel contains nothing objectionable, but *Ulysses* has all those comments on excretion, menstruation, masturbation, maternity, and exhibitionism which probably caused its proscription by the delicate minded authorities.

The main characters in *Ulysses* are Stephen Dedalus, Leopold Bloom, and Bloom's wife. Leopold Bloom is the central figure. He is a Hungarian Jew domiciled in Dublin, and now a staunch Irishman. Like Stephen he has reacted against the culture of his fathers. He has a very considerable intellectual curiosity, but it is untrained and ill-directed. He is given over to day-dreams he would like to retire to the country and play the gentleman-farmer. The only means to achieve this ambition is through some lucky chance—the discovery of a gold mine, winning a sweepstake, or becoming a second Rothschild. Bloom is a sensuous man with peculiar tastes in that direction. They are minor perversions, such as are described in Havelock Ellis's *Psychology of Sex.* As a foreigner and a Jew he is an outsider, yet his sympathies are

with Irish nationalism. (The period of the story is after the Boer War in 1904). He is a generous man, kind-hearted, fond of music and good food. He is weak but not unpleasant. His occupation is connected with newspapers for whom he collects advertisements.

His wife is a singer, of no very great abilities. She is full of the sentimental songs of the music-halls. Her nature is as passionate physically as that of Bloom's, but she is more lazy. Her life is idle and sensuous. She too has her day-dreams. On the whole the two, husband and wife, get on well together, though she is ignorant, and does not sympathise with the vagrant intellectualism of her husband, and he in his turn is occasionally unfaithful in aspiration if not in deed.

Round these three people the book centres. There are of course many other characters. In a sense all Dublin appears, even the Lord-Lieutenant and Edward VII, but these are supernumaries. Though there are crowds of extras the spot-lights are on these three only. The story opens with the awakening and getting up of Stephen in his lodgings. He shares these with other youthful friends whose outlook and conversation remind us of the nihilists in Turgenieff's novels. They are clever, they are ribald, they are hopeless. Stephen is evidently looked up to as a future great man—a poet and philosopher—but his witticisms are mainly bawdy. Their table talk includes Greek history, Milton, Irish folk-lore, Hamlet and sacreligious doggerel. Stephen passes off to the school where he works, and then after some curiously desultory and quite incompetent teaching draws his pay from the headmaster. The latter gives him a letter to the Editor on the foot and mouth disease to be included in some local newspaper where Stephen has influence.

Then the scene switches off to Bloom. We witness his uprising. He gets up, goes out to buy his breakfast—some kidney from a butcher's shop. On his walk to the shop he sees a woman and thinks concupiscently of her. He returns, makes the breakfast, carries it up to his wife. All the details of domestic life are described intimately. There is a letter

from his daughter, hinting at a probable love affair. He prepares himself for the day's work. He has to go and attend the funeral of a friend, so he puts on his best black clothes.

The funeral is one of the main incidents of the novel. It stands out from the crowd of details about dress, furniture, food, the weather, the cat, etc. It is brilliantly done. Somehow funerals are popular with Irish writers. Yeats has described one in his essay *The Last Gleeman*, and Joyce himself in a later novel *Finnegan's Wake* describes another. Bloom meets friends, talks about the dead man, and discusses all the themes incident to death. During the funeral service his mind wanders critically over the priest's indifference and quickly uttered Latin. Other deaths are recalled. The dead man's virtues are reviewed. As the coffin is put into the earth Bloom broods over the theme of corruption. He-sees a rat there, and wonders how long it will be before the rat eats the body. This is a macabre element, fairly common in Joyce, and not unknown in other books. Probably it came to Joyce in the literary sense from Baudelaire through Poe. The funeral recalls to Bloom the death of his father, the Hungarian, who committed suicide. There is a discussion on suicide amongst the mourners. The irrelevance, the combination of superficial respect for the dead with fundamental indifference, the purposeless curiosity of the mourners, all these things are finely illustrated. But though it is an ugly picture, it is gripping in its interest, and like all Joyce's work is noticeable for its complete absence of pathos and sentiment. There is in it some of the grim irony of the grave-diggers' scene in Hamlet. This is not a casual parallel, for Hamlet runs through the book as one of the minor themes, as we shall demonstrate later.

From the funeral Bloom passes on to his daily business, visiting newspaper offices and people in connection with advertisements. There are vivid descriptions of the noise and confusion of the printing press, the gossip of the workers, and Bloom's efforts to get a certain advertisement which will bring him some commission. Each time he approaches a man three

themes crop up—the funeral, the advertisement, and the favourite for the day's race. Bloom's mind also runs over the events of the morning—the letter from his daughter, the rat near the coffin, the woman he saw—all crowd into his head in various altered forms. We see also the mental reactions of the other characters to Bloom, most of them uncomplimentary. They despise him inwardly as a Jew they wonder how he was able to marry such a fine-looking woman as his wife.

Bloom is unsuccessful in his hunt for advertisements, and the time draws near for lunch. He goes to one restaurant where there are many people who have already been introduced into the story, but he is disgusted at the way they eat and the noise they make. This description of the loathsomeness of food and its consumption reminds one of Swift in his *Gulliver's Travels* where the same physical revulsion is portrayed, especially in the fourth book about the Yahoos. Bloom seeks a quieter restaurant, and has a glass of wine and a sandwich. Men pass mental and verbal comments on his stinginess: apparently he was careful never to stand other people a drink. These reflections which reappear many times in the book are a kind of anti-semitic motive. They are not given as the author's own, but we see clearly how such ill-feelings and racial prejudices arise. The wine warms him and sentimental songs run through his head. He wonders whether he should send a postal-order to a girl-friend of his, from whom that very morning he had received a love letter.

He leaves the restaurant and goes to one of the public libraries and museums. He had a sudden whim of curiosity. He wanted to discover just how realistic the nude statues of Greek Goddesses were. Frequently his mind runs on the naked female form. He has what the psychologists might call an anal complex. Once in the library another scene presents itself. Stephen is discussing *Hamlet*. He propounds a theory of his own at great length and with much erudition. Facts culled from Sidney Lee and George Brandes pour out of him in support of it. He says that Shakespeare was forced into

love by Anne Hathaway. *The Venus and Adonis* is the poetical version of this passion, Shakespeare being the shy, reluctant, unwilling lover. When Shakespeare really fell in love with Anne, then she spurned him and turned her affections on to one of his cousins, hence his flight in disgust and pain to London. The *Sonnets*, says Stephen, reveal that in London also Shakespeare was spurned by a woman. All this is brilliantly demonstrated, with quick allusions to Goethe, to Wilde, to Frank Harris, to Shaw, and to, Brandes. It is youthful intellect playing with amusing themes. *Hamlet* is Shakespeare's revenge. The Queen in *Hamlet* is the wife of Shakespeare. Shakespeare is both Hamlet and Hâmlet's father. The second best bed left by Shakespeare to his wife in his will is adduced as another proof of his contempt for his wife. Epigram follows epigram in sparkling perversity. Shakespeare was "a champion French polisher of Italian scandals". The Puritanism of the period is "an age of exhausted whoredom groping for its God." We will return to this Shakespearean interlude later.

Bloom leaves the library, goes into the streets, and stops at a second-hand bookstall. Here he looks over several books and chooses one obviously pornographic work entitled *The Sweets of Sin*. This is not unusual in Joyce. We get descriptions of the meanderings and conversations of all classes and types of people, even the Lord-Lieutenant. To the ordinary reader eager to follow the fortunes of some central character they are irrelevant. But their purpose is to show the activity and life of many people in addition to the mind of Bloom. It is an effort to mirror the insignificance of the individual amidst the crowds of lives which throng around him. It leads up to another great passage in the book.

Various people, including Bloom, arrive at a hotel. We hear the conversation of the maids and their more out-spoken thoughts. Different men sing. The songs are sentimental, but everyone likes them. In between the songs one of the men flirts with the maid, who displays her garters. Bloom recalls songs his wife has sung, and their erotic effects. The major

incidents of the morning still crowd into Bloom's mind—the letter he received, the rat he saw at the funeral, his erotic memories, and music. Not only do we have an image of Bloom's mind, but the other less important characters are there also, with equally picturesque and lively mental processes. Sometimes it is difficult to discover to which character the revelation refers. Sometimes their memories recall incidents which are unexplained. With Bloom it is comparatively simple. His story is clear in our minds, but with the other people we often do not know to what their minds refer. Noticeable in all these mental pictures is the strong streak of sexuality. Their thoughts cannot get free of sex.

From the hotel where he heard the music Bloom progresses to what must be a public-house and gets involved in a quarrel. Again there is the same confusion owing to the multiplicity of characters and the difficulty of deciding who is speaking. Sometimes also it is not all clear whether it is speech or thought which is recorded. The confusion in these semi-crowd scenes is really very great, and does not seem to serve any purpose. It looks as though Joyce were being deliberately obscure out of a perverted sense of humour; these obscure passages are also the most pornographical. One wonders whether the obscurity is deliberately decorated with this pornography in order to keep the reader's attention there. It is a malicious trick, quite in keeping with Joyce's ironical attitude to things. In this conversation Bloom's past is unfavourably recalled, so is the funeral; there is some satire of spiritualism and hangsmen and the Sinn Fein movement. It is a marvellous specimen of inconsequential half-tipsy Irish conversation, hovering all the time between the brilliant, the bawdy, and the nonsensical. As the conversation continues it becomes easier to follow owing to a trick of style. Each remark or speech is narrated twice—first in the crude and difficult vernacular of the speaker or thinker, and then in language which is clearly a parody sometimes of the Bible, or Homer, or Medieval Romance, or modern journalese. Later when we discuss the style of Joyce we will return to these.

The scène ends with a quarrel. One of the speakers grossly insults the Jewish race, and Bloom turns on him with the taunt that Christ also was a Jew. Bloom exists hurriedly from the pub.

An idyllic scene follows. It is early evening and Bloom has gone to the sea shore for a walk to refresh himself after the violent discussion in the public-house. Three girls are seated on the rocks, minding children and chattering amongst themselves. One of them, Gertie, is particularised. She dislikes the crudeness of conversation of her friends, is angry at the noise and malice and dirtiness of the children, and day dreams about her lover and her physical attractions, persuading herself all the time that she is perfectly modest. It is adolescence making its idol out of itself all of clay, and with complete unawareness. The girl sees Bloom and Bloom sees her and both undergo an acute erotic experience. The girl does her best to attract Bloom with exhibitionism, and she invents all sorts of romantic stories about him. Bloom gazes at her enjoying everything. He is however too afraid to accost her. Some of the irony of Browning's *The Statue and the Bust* is contained in Joyce's description of this pair of lovers. Bloom remembers pleasant experiences with his wife and daughter. He moralises on womanhood. In this long scene the simple and subtle malice with which Joyce reveals some of the functioning of the feminine mind are remarkable. The realism of the girls looking after the children is extremely vivid. And the investment of a comparatively commonplace and sordid incident with a halo of romance is a master-touch of irony. He is both mocking the actual occurrence in life, and the ordinary descriptions of that thing in the novels of the day.

As night falls and the cold of evening comes, Bloom with an old man's wisdom walks away. His previous thoughts and dreams were all the same theme of woman, so perhaps it is natural for him to visit the local maternity hospital to see how a friend of his is getting on. At the hospital are more young men doctors and students who discuss together. The amount of of semi-intellectual conversation which goes on in *Ulysses* is really surprising. Much of it in this example is relative to

the purpose of the institution where all find themselves, that is, maternity, and part of it is couched in mock-heroic language, the style of medieval chronicle. One of Stephen's bright young friends discusses, an idea he has of setting up a national fertilising farm, with himself as the fertiliser. Bloom listens to this with certain aloofness. Joyce describes the impression their language made upon Bloom, in words which the ordinary reader might well use of Joyce himself. He says: "The young sparks, it is true, were as full of extravagancies as overgrown children: the words of their tumultuary discussions were difficultly understood and not often wise: their testiness and outrageous *mots* were such that his intellects resiled from: nor were they scrupulously sensible of the proprieties though their fund of strong animal spirits spoke in their behalf."

It is indeed the vitality of these passages which arrest us. They mingle animal spirits with real intellectual power in a way rare in English novels. Bloom hears that the lady has successfully borne a child, and at the news all the men rush out into the streets of Dublin, followed by Bloom.

What follows is a little difficult to interpret. So far the narrative has been in comparatively straightforward prose distinguished only by an unusual frankness of expression, and a few neologisms. Now we are given dialogue and stage directions. All sorts of people appear. People change their dress, the scene changes often. Dead men appear, camels come on. Through it all there is a certain thin thread of continuity. Most of the people speak to Bloom, he is constantly abused. He is tried as in a court. There is a terrible quarrel in what must be a brothel, and horrible women appear voicing hateful things. Later there is a quarrel in the streets, with Stephen as the central figure, and Bloom as the spectator. It is not possible to interpret all this with the same literal realism as one can the preceding portion. Indeed this part of the book is so surprising because it offers such a contrast. The earlier half, what we have discussed so far is distinguished for its acute and minute realism. Four hundred pages have been occupied in describing the events of

some eight to ten hours. This is a triumph of analystic realism. But this which follows is quite different. It is a kind of poetical-prose nightmare. At a later portion of the book when Bloom is reviewing the day's events we find between the visit to the hospital which is unmistakable, and the next clear event, the conversation near a cabman's shelter, only this incident described: "the visit to the disorderly house of Mrs. Bella Cohen, 82 Tyrone Street, lower, and subsequent brawl and chance Medley in Beaver Street."

Some two hundred and fifty pages of the book, a good third of it are devoted then to this visit and brawl. It seems that if one interprets the dialogue as the mental thoughts of the main characters, which is what one does in the early half of the book, these pages contain the drunken imaginings and fears of both Stephen and Bloom. At the end of the drinking, the confused talk, and the even more confused visions and dreams comes reality in the shape of a quarrel. Stephen is slightly hurt and Bloom takes him away to a cabman's shelter.

Here they drink coffee and talk with the strangers there. Another spate of conversation: There is a drunken sailor who relates impossible adventures on the high seas and in all the ports of the world. They talk about the soul, and cocoa, and music hall entertainments. Irish politics and the question of the Jews crops up again. Parnell and his fall is referred to. Bloom, half tipsy and half sentimental, produces his wife's photo for Stephen's admiration. Bloom grows more affectionate towards Stephen and thinks of taking him under his especial protection. As the hour is late, it is really early morning, he asks Stephen to go home with him and spend the night at his place. Stephen agrees and they walk off homewards in the night talking still together.

Another clearly separated passage follows marked by the change of style. The conversation of Stephen and Bloom on their way home, and at his home, is described, perhaps out of mock compliment to their intellectual powers, in catechistical phrase. The author asks for instance "of what did the duum-

virate deliberate during their itinerary ?" and answers "Music, literature, Ireland, Dublin, Paris, friendship" etc. For a hundred pages we have the question and answer form of narration, and it provides a certain amusing irony, and keeps the author aloof from his creations. Some of the answers strike one as long-winded. Bloom at home begins to prepare some cocoa for his guest. First he has of course to turn on the water-tap. The author asks "Did it flow ?" and answers, "Yes. From Roundwood reservoir in county Wicklow of a cubic capacity of 2,400 million gallons, percolation through a subterranean aqueduct of filter mains of single and double pipeage constructed at an initial cost of £ 5 per lineal yard " etc. We are given the whole history of water, and its chemical properties. Many of the answers are of this nature. There is a lengthy analysis of the furniture in room and the contents of a drawer in the same style of supplying universal knowledge. There are involved mathematical problems relating to the ages of Bloom and Stephen. The two recite Gaelic and Hebrew verses, which leads us to several pages of learned antiquarianism. Bloom remembers his daughter and half dreams of a match between Stephen and her. He thinks of asking Stephen to stay permanently with them. He suggests that Stephen might teach his wife Italian. She could utilise the knowledge in singing. Stephen, however, refuses all these offers and goes out. Bloom sees him off. They admire the stars, their admiration resulting in a disquisition for the leader's benefit on light and astronomy. Then Bloom returns and after he has undressed, he day-dreams alone about the future when the acquisition of great wealth will enable him to do what he likes, and then creeps upstairs to bed. In bed he tells his wife some of the day's happenings, discretely omitting all those which might compromise him, and then falls asleep.

The last part of the book begins. It is a transliteration of the thoughts, and wishes of Mrs Bloom after she has been awakened by her husband. Again there is a change in style. Instead of the highly intellectual catechism we have a stream of ideas and images put down racingly as they come into Mrs

Bloom's head. The representation occupies fifty pages, and in them there is not one mark of punctuation. The ceaseless flow apparently resembles the inane and childish ideas of the rather ignorant woman. It is by no means so difficult to read and to follow as the nightmare piece, in dialogue with stage directions, which we have previously mentioned. Her thoughts are coloured by her anger at her husband coming in so late at night and evidently slightly intoxicated. She recalls all her old grievances against him, especially how he flirted outrageously with the servant-girl. She remembers how he favoured her daughter and gets angry with her. She is clearly jealous of her daughter winning her husband's affections. She ridicules all Bloom's weaknesses, his sudden enthusiasms, his attempts at culture, his day-dreams and his physical passion. She recalls her own childhood and girlhood at Gibraltar, and her early loves and flirtations. She dwells lingeringly on the physical side of love, but is repelled by it in the end. She considers woman doubly unfortunate owing to her passivity in love, her sufferings in maternity, and her trouble with constant menstruation. So she rambles on revealing all her own mind and feelings, and describing Bloom to us, until the author puts an end to it all by writing Finis.

Unique though the book is in many respects it is clearly in the tradition of great English novels in two most important ways. It is remarkable for the fullness and richness of its central characters, and it is remarkable for the brilliant detail of its persistent back-ground-Dublin. If the book is confusing it is simply because the author has taken special pains to reveal his characters. They stand out not only in their own words and the author's comments, but in all the multiplicity of their thoughts and day-dreams. Every little whim that comes into their minds, every little memory, is recorded. The method of course owes much to the teaching and practice of modern psychology. Joyce is only original in his application of it on such a full scale. Even the earlier novelists anticipated him to some extent. Thought, mind, and dream analysis occur in most of

the classical English and European novelists, but rarely with such extreme consistency. One result of the concentration in time, the limiting of the narrative to a mere twenty four hours or so is that development in character is not exhibited. The growth of a human mind and its many changes is not shown. We are given instead a static interpretation of human beings. No changes are recorded. It is true to life only in a narrow sense-like the earlier book whose continuation it is, it is portrait, not a moving scene.

Yet how richly and vividly does he paint! The long final mental soliloquy of Mrs. Bloom is a wonderful relevation of the vulgar sensuous woman with her incipient half-resentful, half-malicious jealousy, and her day-dreaming on pleasures past. Stephen perhaps for all his intellectual brilliance and ceaseless powers of conversation is not so interesting, not so human. He is dwarfed by Bloom whose make-up is more subtle and delicate and involved. It is natural perhaps that youth should appear somewhat shallow, and the adult mind more intriguing. None the less remarkable are some of the minor scenes and characters. Quickly and easily Joyce gives us real Dublin life —the boys in Stephen's school, terribly casual and cruelly indifferent—the little children on the sea-shore, bundles of infantile wickedness—the men in the pubs, garrulous, boastful, sodden in mind and talk. These things constitute some of the greatness of the novel.

We have already referred to the curious structure of the book, and to the change in style indicating some major division in the events of the day. The first part of the book is in simple fluent prose, sometimes of a fine dignified literary quality, at others reproducing the slang and vulgarity of common speech, and again imitating the staccato incoherence of much of our ordinary thought. There is a unity about this portion of the book made apparent by its consistent style. The events narrated, the feelings and impressions described are comparatively commonplace, and find their best expression in the form adopted. The change over in the second main portion of the

book to animated, incoherent dialogue, with kaleidoscopic changes of scene and situation is an attempt to symbolise the drunken vagaries and mental debaucheries of Bloom and Stephen in the brothel. It is to some extent a representation of Bloom's subconscious mind, made possible by the excitation of alcohol and stimulated by the sex-impulse which Bloom has throughout the day developed. Bloom talks to his father, he addresses strange women, he is accused and apparently tried as in a court. He changes shape and dress. His father comes back from the dead in his mind to recall to him the stricter principles of Judaism. The vision of his father is really the pricking of his conscience protesting against his presence in the brothel. The talks to the different women represent partly actuality, in that Bloom did talk to some of the women there, but also partly the satisfaction of some of his unrealised desires. Bloom was too timid, too bourgeois, and too careful to let himself really go. Not for him the mad exhilaration of sin. In his fuddled condition he imagines himself meeting these women, and he provides them with suitable reactions to himself. Most of the women accuse, insult or shout against him. This is symbolic of the characteristic desire with Bloom to be overpowered, to be beaten, to be the inferior. It is made unmistakeably clear in that scene of the night-mare conversation where Bloom is threatened with a horse-whipping by a woman. It is the masochistic element in Bloom exhibiting itself. The apparent trial is a further demonstration of this. Mixed up with this perverted sexual streak are Bloom's racial experiences. As a Jew he has felt fear and hatred and contempt of the foreigners about him. He has, it is significant, no real friends in the novel. He is alone. The last portion of the novel where he clings to Stephen and imagines that he has discovered an intellectual soul-mate is another proof of this. Bloom as a Jew was disliked. His unpopularity and his fear are made evident in the nightmare dialogue. In all these ways we can justify and explain the strange impressionism of this part of the novel, impressionism we fear carried to such lengths of obscurity, fantasy, and obscenity, as to make the

whole passage repellent rather than attractive. It does not grip our interest as do other sections. There are too many quick changes, too many variations on the same theme. We may admire the artistic skill displayed, but it is a half-hearted admiration.

The subsequent portions are far more satisfying and brilliant. There is the comparatively brief conversation piece at the night-watchman's shelter in the same vein as the first part of the book, and for the same reasons. The intoxication and befuddlement have worn off. It is followed by the catechistical section. This is an impression of intellectual keenness made unusually acute by the lateness of the hour, the previous alcoholic stimulation, and the mood of the hour which possessed both Bloom and Stephen. There is something especially appropriate in this style to both Stephen and Bloom, the one an intellectual trained in the Jesuit school, and the other full of the Jewish tradition. It is also pleasant to the reader for it gives him copious floods of clarity after many pages of obscurity. It throws out light both before and after. We learn much about the past of the two men, and of their habits which enables us to visualise and to understand them the more easily. In this passage the author comes into closest contact with the reader and shares his every confidence, yet the whole is impersonally done. It is a fine and new achievement. It is the application of a medieval pedagogy to the art and practise of the modern novel. Frankness and candour are obtained in an extraordinarily impressive manner. Sometimes the encyclopoedic interest of Joyce overpowers him, as in his lecture on the properties of water and of the stars, yet these too have their significance. They are relevant because they illustrate the interconnection between all things natural, and man. Both Carlyle and Pascal were terrified and oppressed with the thought of the infinite because it seemed to them to isolate man within a barrier of insignificance. Joyce following Nietzsche and other modern philosophers emphasises the relation of man withall things. Man to him is not a point in infinite blackness. Man, each man,

is the centre of the whole net work of existence. In a sense everything exists for him and because of him. This is a humourous dogma to say the least. It is significant that there are many references to Nietzsche in the novel.

Finally there is the long, ceaseless, endless, unpunctuated mental soliloquy of Mrs. Bloom. As we have already said this is a very clever satire on feminine mentality, and a very realistic representation. It is thoroughly justified in the sympathy it reveals between the style and the subject matter.

The structure of the book is therefore clearly related to its subject matter. The changes in style are not casual or incoherent. There are sound artistic reasons for their justification. The variety of styles afforded is a great change from the uniformity of most novels and works of art. In this Joyce is following Shakespeare and the great Elizabethans, rather than the other classical writers. Dickens offers us one continuous stream of humorous and pathetic sentiment: Oscar Wilde and Bernard Shaw are uniformly witty and intellectual: Carlyle is persistently pompous and obscure, but Joyce with Shakespeare rings all the changes. Bawdy, eloquence, rhetoric, subtelty acute observation, and intellectual wit follow one another in both Writers. There is the same mixture of elements in *Hamlet* as in *Ulysses*. We regard this as an artistic device of a very high order.

It is clear that in *Ulysses* the style is as important as the subject matter, and it deserves separate and full consideration. In a sense *Ulysses* is a grand experiment in language. There is nothing particularly novel in this. Many writers in love with their art have evolved peculiar vocabularies and artificial rhythms. Spenser's *Faerie Queene* is written with deliberate archaism. It is an effort to recapture the spirit of a distant, and in Spenser's case, quite imaginary past. Most critics have praised Spenser for the consistency and thoroughness with which he has carried out his plan: they have also noted that the execution has its price. The *Faerie Queene* is an indisputable masterpiece of English literature, and Spenser ranks with the very

few supremely great writers in English. But he is not a popular poet. He has never been widely read. His great poem is far too difficult to command a large audience. Rightly has he been called the poet's poet. It is a sublte praise and dispraise. It indicates his high position in the hierarchy of poets : it infers that he is not the people's poet. The same is the case with another great writer in English---Sir Thomas Browne. As with Spenser he receives more lip-service than real devotion. A De Quincey may worship at his alter in veneration of his trumpet-tongued proclamation, but not many people read and enjoy him. The grandeur and stiffness of style : his massively majestic sentences : the richness and strangeness of his vocabulary are unique in English literature. The beauty of Sir Thomas Browne is like the Beauty of an Etruscan tomb : it is dark and massive in architecture, yet on the walls are wild figures most splendidly coloured, and richly drawn. About both there is mystery. We do not even now after two centuries of archeological investigations and learned speculations know much about the Etruscans. Yet we can, or those who have rare and sensitive taste, can admire them. It is the same with Sir Thomas Browne. His mind and expressions are remote from our experiences. They were remote from the experiences even of his own time. The art form of his own time. The art form of Sir Thomas Browne was unique to himself. So it is we think with Joyce. That he is difficult and obscure, we do not deny, but we insist that he is a great artist. We insist that a sensitive critic can offer some guide to his book. We deny completely that the incomprehensibility is the result of sheer perversity. Joyce has produced what is rare at all times in literature, and especially so in this prosaic modern age. He has produced a work of art. It is a book which appeals to something deeper than the intellect, therefore it cannot be rationally explained. That there is allegory and satire in the book we firmly believe, but there is beauty also of a subtle and strange kind, and this beauty cannot be explained. Its appreciation and enjoyment are however more likely to come to those who are already full,not only of under-

standing of, but of worship of the great things in English and European literature. People complain that they do not "understand" Joyce: it is a complaint the proper answer to which is found in Ruskin and Carlyle, in those celebrated passages where both glorify the great books of the world.

That Joyce is a master of language is shown in his many half- ironical parodies. In the conversation in the public house we see modern journalese and modern Irish slang side by side their two voices uttering the same idea. The men are taking about a boxing match. One of them says:

"Handed him the father and mother of a beating. See the little Kipper not up to his navel and the big fellow swiping. God, he gave him one last puck in the wind. Queensbury rules and all, made him puke what he never ate."

The lover of English who knows that often out of the mouths of the common arise words later enshrined in poetry will not despise these lines. He will value the preservation of that word "puck" he will notice the survival value of alliteration in the close juxtaposition of the two words "puck" and "puke": he will see the richness of the two idioms-"the mother and father of a beating" and "to puke what he never ate". These are not vulgar things: they are fine attempts at expression. How rich and living they are we see when we compare them with the parody in journalese which follows:

"It was a historic and a hefty battle when Myler and Percy were scheduled to don the gloves for the purse of fifty sovereigns. Handicapped as he was by lack of poundage, Dublin's pet lamb made up for it by superlative skill in ringcraft. The final bout of fireworks was a gruelling for both champions."

How vulgar and blase this is! The alliterative effort of 'historic and hefty' is weak and undignified compared with the previous one. The worn-out idioms, the cliches, 'scheduled to don', 'handicapped as he was' are lifeless compared with those spoken by the common man. Joyce is surely mocking the Journalist, and the causes of that journalism- a cheap and superficial universal education, which paralyses language and thought.

Consider the futility of that phrase, 'lack of poundage'. It contains two abstractions. It is a feeble effort at a kind of pedantic joke, the use of which the Fowler brothers castigate. so brilliantly but ineffectively in their *English Usage*. Compare 'lack of poundage' with the stark and vivid realism of the common man's phrase 'See the little Kipper not up to his nevel'. Both are trying to describe the idea, that one man was big and heavy, and the other short and light in weight. The concrete comparison with a Kipper quickly and easily conveys just the right shade of meaning the smallness of the man, and his lightness and deftness·like a slippery fish. Kipper too as a vulgar word and a common thing gives us preisely the right atmosphere. The journalist with his 'lack of poundage' is glorifying the boxing match, trying to make an ugly commonplace thing into something splendid. But the common man has no illusions: he has no desire to flatter vulgarity and ignorance. Kipper is the right word. Then consider the phrase 'up to the navel'. How aptly it comes in to indicate the smallness of one of the men, how vividly it gives us the physical picture of the two boxers, in tights. The common speech is thoroughly true to life.

Another kind of effect is obtained in other parodies. A little later in the same scene the men are talking together about the English and their Empire and what maintains it. As Irishmen naturally they do their best to belittle it. It is all based on the grossest brutality. We quote the first passage in the straightforward language of the speaker:

"So he starts telling us about corporal punishment and about the crew of tars and officers and rear-admirals drawn up in cocked hats and the parson with his protestant Bible to witness punishment and a young lad brought out, howling for his mam, and they tie him down on the buttend of a gun."

How cleverly is the contrast maintained between the elaborateness of the ceremony and the insignificance of the thing done. Rear-admirals are present in cocked hats just to witness a boy punished. The satire is cutting; no less malicious is the introduction of the parson, and the contemptuous reference to

his protestant Bible, with a small 'b'. The satire is not primarily Joyce's: it is of the character who speaks. But it is a brilliant demonstration of the Irish view of England, of how races belittle, despise, and misunderstand each other. Something of Joyce's own views seems to come in the second statement of this idea. Here he speaks with the furious and bitter indignation of Swift, expanding that incident of the flogging of a sailor to the sacrifice of a saviour, and making the creed of Empire depend on brutality and grossness. The paragraph is a parody of the Nicene creed, It runs:

"They believe in rod, the scourger almighty, creator of hell upon earth and in Jacky Tar, the son of a gun, who was conceived of unholy boast, born of the fighting navy, suffered under rump and dozen, was sacrified, flayed, and curried, yelled like bloody hell, the third day he arose again from the bed, steered into heaven, sitteth on his beamend till further orders whence he shall come to drudge for a living and be paid."

The passage may well be offensive and unpleasant to Christian believers but it is extraordinarily well done, and in its fundamental purpose quite Christian in spirit. It is one of the bitterest denunciations of the Imperialist spirit and its basis we have ever met. It is the more bitter because Joyce has restrained himself so admirably. Our main purpose however is to illustrate the power of the language rather than the depth of thought. Few can deny how effective this passage is. Perhaps its greatest virtue is its economy of effect. Joyce like Swift can convey an infinity of feeling in very few words. His style is profound in the truest sense. That Joyce has close resemblances to Swift we have already mentioned. In this passage we have not only the similarity of style, effect, and purpose, to justify our view of the influence of Swift, for the preceding line is a direct reference to him. One of the men calls the English "Yahoos." That Joyce had Swift in mind is even more probable when we remember that Swift too was capable of using the language and matter of the Holy Writ for the purposes of satire. *His Tale of a Tub* is as close to the creed as the paragraph we have quoted.

To illustrate fully all the felicities of Joyce's style would be a work of years. Joyce definitely invites the attention of the sympathetic glossator and commentator. His book is profound enough to require a Concordance and an annotation running to many volumes. Here we are only writing an essay. Still we cannot avoid reference to one other form of parody which occurs, that of Homer, for it has a special significance. The characters in the same scene, the conversation in the pub, are talking about Bloom and his wife. She is described as follows :

"Pride of Calpe's rocky mount, the raven-haired daughter of Tweedy. There grew she to peerless beauty where loquat and almond scent the air."

We do not give more of it because our first purpose is only to show the similarity with Homeric language in English dress, especially that of Andrew Lang's version. The parody serves the purpose of ridicule. Mrs. Bloom was just a vulgar sensuous woman : she does not deserve this grandeuer of description. The difference between the words and the woman described are obvious at once : But the ridicule is more subtle. Mrs. Bloom. and the other characters also, for the Homeric parodies all serve the same purpose of ridicule. do not merit such high-sounding praise. That is clear. Joyce however may be suggesting that neither did the Homeric characters. He may be inferring criticism of the kind Shakespeare employs in *Troilus and Cressida* belittling the Greeks and the classical world ; belittling in the sense that it is a demonstration that they too are human, perhaps all too human. Such a criticism is not at all impossible when we remember that the most recent modern sources of it, George Brandes in his *Life of Shakespeare*, and Friedrich Nietzsche in his *Menschliches Allzumenschliches*, are quoted or referred to frequently in this book *Ulysses*. Joyce evidently had them in mind.

Other characteristics of Joyce's style are easily noticeable. One is the trick he shares with Rabelais of using strange and gross words, words and ideas many times repeated, and for-

bidden words. His vocabulary is very large: it is increased by the diversity of styles he adopts, for it includes the jargon of Dublin street boys, the language of dialectically inclined graduates, the terms of medieval romance, and the conversation of ordinary people. Subject matter usually omitted from novels is included—such as scientific technicalities, legal technicalities, the terms of literary criticism, and the language of the Church service. We have not seen any estimate of the size of his vocabulary, but it is certainly unsually large.

One very obvious feature in his vocabulary is thenumber of foreign words introduced. Stephen and his friends utter Greek and Latin words. Stephen has persistently in his mind the Latin version of the service for the dead: it runs through his mind oppressing him for it is the symbol of his mother's recent death, and he is half angry with himself over his attitude to his mother. He displayed a certain callous indifference, then grew ashamed of this, and then became angry at his shame. The Latin sentences are the theme which remind him of his mixed fellings, and an indication that he is still troubled at heart,wanting self-confidence in the sincerity of his feelings. German, French and Italian occur with some frequency, the latter generally in the form of selections from light Italian songs. There are also scraps of Hebrew and Irish. The justification for all this lies in the characters themselves. It is true the foreign may confuse and irritate the non-linguistic reader, but they are nevertheless a part of each character. It is natural for Stephen just fresh from an academic education and still haunted by the religion of his race to have his mind filled with Latin. It is natural for Malachi to utter words in Greek, because his character though sketched lightly hinges on the Greek theme. Malachi is the modern, wishing to revive the beauty and freedom of the Greeks. At the very beginning of the book he praises the Greeks and their sweet tongue. It is natural too for the Irish to occur to the nationalist characters, and for the Hebrew to occur to Bloom. Moreover the presence of these multitudes of foreign words and phrases is in keeping with an interest evidently dear to Joyce—that of language and expression itself. Just

as the conceits in *Love's Labour Lost* demonstrate Shakespeare's artistic interest in language and expression so do these foreign words of Joyce.

The book owes much of its length to two things, the method of repetition and the intimacy of revelation. Every possible action however slight is described, and thoughts that accompany the action are written down. Thus Bloom opens a drawer, and its contents--books, letters, buttons, photographs, nibs, X'mas cards, newspaper cuttings, postcards, etc., are described. Bloom looks at his books and their full list with additional comments is given. In this way the novel grows in length. The method has definite significance. All these details are part of Bloom's universe, and his universe is his character, and it is his character, his personality which Joyce is illustrating and unfolding. From *Ulysses* we see how all the things about a man are keys to our understanding of him. From *Ulysses* we see that nothing is irrelevant. In this respect Joyce is superior to Rabelais. The latter author, especially in his enlarged English dress made by Urquhart, gives us huge lists of words which are often quite without significance. They are given partly out of sheer zest. Rabelais and Urquhart simply want to display the extent of their knowledge of words, so down the list goes. But with Joyce every detail is significant.

The method of repetition throws light upon another feature of his style. Joyce is primarily an impressionist—accurate and detailed it is true but an impressionist. He is not a photographic realist. He repeats ideas and thoughts in different moods as we have seen. He will not let us forget any significant detail or event which has arisen. References to the funeral of Bloom's friend, to Stephen's brooding over his mother, to Hamlet, occur and re-occur. Joyce is an artist repeatedly splashing on the same colour. Some of the parodies we have quoted illustrate this, and there are many more of them. The whole of the nightmare dialogue scene is constant repetition. Each change is a variation on the theme of Bloom's fears and sexuality. It is impressionism, however, which except possibly

in this one scene, sacrifices nothing to realism. This is especially clear in the conversation and thoughts of vulgar characters. Their illiteracy, their ejaculations, their vivid concrete words are all put on record.

This realism is one of the major features of the style of *Ulysses*, but it goes hand in hand with an effect which is usually regarded as its opposite. The book is vital in the sense that it is most closely related to the intimacies of ordinary life, but it is also highly literary. Many authors are mentioned by name, some we have already referred to—Shakespeare, Beaumont and Fletcher, Nietzsche, the Shakespearean critics Bradley, Lee and Dowden. There are references to the Greeks; there are lists of books; even Baul de Kock is not forgotten. Literary allusions are most frequent. The deliberate experiment with style is the work of a man of letters. We suspect that it is this strange combination of literariness with an almost obscene realism which makes the book confusing to so many readers. They go to the book having heard it vaguely associated with advanced modernism and are met with Hamlet and the Catholic Liturgy. To us the literary elements in the book are one of the measures of its greatness, for Joyce does not introduce them as books. To him they are living minds still, 'the precious life-blood of a master-spirit.' It is only a very great genius who can be nourished by books and yet grow. It is only a great man who is not crushed by books. Joyce carries the load of literature lightly, or rather with him it is not a load at all, but still part of living experience.

We have referred to the digression on *Hamlet*. This again is a specially significant part of the book. One of the themes of *Hamlet* is disgust with sexual attraction, manifesting itself regardless of customary morality, and in defiance of the dictates of a sensitive spirit. Hamlet loathes his mother because she has married his uncle, he cannot get the image of his mother and his uncle in bed together out of his head. So in *Ulysses* is there a strong vein of disgust at sexual irregularities. Hamlet is an intellectual character as Stephen is. *Hamlet* is full of brooding on the mystery of life, no less is *Ulysses*.

The criticism and discussion take place in the library in the afternoon. It begins with a reference to Goethe's *Wilhelm Meister* and the famous criticism of *Hamlet*. One of the characters quotes it reverently. Another character cites what appear to be the views of A. E. (George Russell), that the significance of *Hamlet* lies in the way it brings the mind into contact with eternal wisdom. The other says questions whether Hamlet is Shakespeare, or James I, or Essex, do not matter. They are school-boy's discussions. Stephen interrupts with the significant remark that Aristotle was once a school-boy. It is both a measure of his high opinion of Aristotle, and a challenge in favour of the historical interpretation of the play. Stephen links Hamlet's musings with Plato's philosophy, both are great. Another character mentions Mallarmé's prose-poem of *Hamlet,* describing a production of the play in a French provincial town. Stephen introduces Greene's outburst against Shakespeare and Swinburne's praise of him. In a page or two a very considerable body of Shakespearean learning is referred to—and this in a book which has been condemned as merely vicious pornography, or derided as incomprehensible. Of course it is true that Greene and Mallarmé are beyond the compass of the ordinary reader, and even Goethe and Swinburne are probably little more than names to most people. Stephen now begins his analysis and explanation of *Hamlet*.

Hamlet is a ghost story, that is the story of one who has faded into impalpability through death, through absence, through change of manners.' The definition Stephen supplies suggests at once that a man may be his own ghost if his past returns to him. Stephen imagines Shakespeare at the theatre on the Bankside playing the ghost to Richard Burbage's Hamlet. When he says "Hamlet, I am thy father's spirit" he is speaking to his son, his own son, Hamnet Shakespeare, who died young. Shakespeare as the ghost is thinking, according to Stephen, that "you are the dispossessed son : I am the murdered father : your mother is the guilty queen, Ann Shakespeare, born Hathaway." The other listeners protest against this interpretation

with its suggestiveness regarding Shakespeare's family life, but Stephen persists. He carried the memory of his unlucky marriage with him: it is embodied in *Venus and Adonis.* He was forced into that marriage with Ann Hathaway, forced into wooing her—and that experience cost him his self-respect. He cannot forget the impression: he cannot forget the image of ravisher and ravished. In the *Sonnets* again he is the spurned lover. He feels it bitterly. Two deeds are rank in that ghost's mind: a broken vow and the dull-brained yokel on whom her favour declined. Stephen declares that if in the fifth act of *Hamlet* Shakespeare has not branded his wife with infamy then they must explain his long silence through thirty four years about his wife. He asks why did Shakespeare leave his wife his second-best bed if not as a mark of contempt? His wife's revenge was infidelity when young and resort to Puritanism when old, Puritanism being the bitter enemy of Shakespeare and his profession.

We do not know how far Joyce is being ironical in this exuberant passage. To us it rings true rather than ironical. Joyce employs his humour not in deflating Stephen, but in gibing at his audience who offer objections. It is significant also that Stephen's language is pure and rich throughout, whereas the other characters speak inconsequential slang and mild obscenity. These are slight indications but to us decisive that Joyce is more or less sincere in his *Hamlet* criticism. It is interesting to notice that if this is so then Joyce is in the line of great Romantic critics from Morgann and Hazlitt to Dowden, Swinburne and Bradley. Though *Ulysses* is written throughout in an ironical unromantic vein yet it is written with that sympathy and enthusiasm and generosity which are the common possession of the great Romantics though lacking to their lesser followers. Joyce has a conception of greatness, and it is to ennoble this and glorify it that the book is written. Wherr deflation occurs it is of the stupidities and futilities of the ordinary man. The passage of criticism is of course another proof of the keen literary quality and interest of Joyce.

We are progressing slowly from the subject-matter of the novel through its style to its purpose. What is the meaning of *Ulysses*? Here we claim the critic's privilege to attribute purpose where the author may have been indifferent. The critic, to follow Wilde's dictum, is an artist and has his own right to create. One's first impression of *Ulysses* resembles one's first impression of the last two books of Swift's *Gulliver's Travels*. There is a sense of revulsion at the ugliness and horrors revealed, but the realisation soon follows that the author's passion and disgust are greater than ours. *Ulysses* had its birth in a flame of Puritanism: it is an exposure of vulgarity: it is a demonstration of the essential qualities of modern civilised life. Mind and tongue are blighted with a stream of obscenity. Passions and feelings are crude. Our life is filled with malicious little hatreds and stupid sensuous day dreams. There is not a noble character in the book, because Joyce does not know such in life. Yet if there are none very great there are none very bad. The impression we get of human beings in *Ulysses* is that they are weakly sensual and foolish.

This granted then *Ulysses* may either be a record of contemporary life without especial purpose: or it may be a record written with special feelings and intensity to draw attention to a state of affairs and to conditions of mind which will disappear in the acid of the realisation. Joyce's book is a great effort at consciousness. It is a striving to make people aware. Once the awareness comes then the moral purpose of the book is satisfied and the reader can be left to its aesthetic enjoyment and to marvel at the intellectual powers displayed. We belive that this striving to penetrate the reader's awareness explains the presence in the book of those parts usually considered objectionable. Constant references are made to the natural functions of men and women such as excretion and menstruation to make us realise that these too are a significant part of life. If we forget them, or worse ignore them and pretend that they do not exist we are damaging life. They are not nice things, yet to suppress them is dangerous for it creates a habit which easily

spreads. Many of the evils of society and life are due to the unawareness of the majority of people. They have no consciousness. When wars go on they do not realise what war means. When death occurs they quickly forget it. Nothing makes an impression on them save the pursuit of their own minor sensual pleasures. It is because they are blind and deaf and in Ruskin's sense vulgar. It is due to their power of forgetting, their hiding and concealing, and altering all bad and awkward things, which bgeins with all the childish circumlocations to distort the simplest functions of life. Hence we feel Joyce insists that we must be aware of these things ; hence his many references to them. They are on the lips of all the characters. Some thought about them is unavoidable. It is true that at times Joyce's ironical sense of humour may lead him into these expressions out of sheer mischief. But such an explanation will not cover the whole book. The joke would be too thin. We feel compelled to believe that Joyce wanted to shock the reader into awareness of life. Still this is probably a controversial point.

Other matters are clearer. There can be no doubt as to certain elements of satire in the book. It is a representation of the mind of Dublin, of the mind of nationalist Ireland. Some fun is made of this. The book is a kind of burlesque on the extravagance and prolixity of Irish conversation. It is endless talk on all manner of subjects. Surely there is here the gentle hint between the lines that there is too much of this talk. The conversation of Stephen and his friends, all young men from the University, is full of satire against that literary intellectualism and mocking disbelief and absurd self-confidence so common to educated adolescence. Malachi and his witticisms, Stephen and his apparent profundity, are delightful mockeries of the youth of world. A good deal of the obscenity, be it noticed, is contributed by these youths—for their talk is naturally salacious. It is not only the crudity of youthful enthusiasm and the salacity of its conversation which is satirised. The young men are open cynics, but the older men cling to political beliefs, to their hope in the salvation of Ireland through the triumph of

nationalism. This again is a topic ironically and satirically treated. Joyce laughs at the terrorists and the Sinn Fein movement, equally does he jest with the connection with England. Nothing in the political situation commands his allegiance. On all sides there is mockery. He laughs at half-drunken Irishmen declaiming against the Saxon. He laughs at the pretentiousness of English Imperialism. Joyce spares no one. *Ulysses* might well be called a satire on Young Ireland, a jest at the Gaelic movement. Many of the parodies recall the verbosity of Irish politicians, and the airy nothingness of Irish writers following Yeat's Rose of Beauty into the mists. Joyce has little sympathy with the romantic vagueness of the Gaelic movement. Its world of fairies, leprecauns, and Ireland in tears mourning symbolically is grossly satirised in the nightmare dialogue scene. The love of symbolism, the excessive indulgence in day-dream, the flight from reality, the descent into grossness, all these are qualities common to the nightmare passage and the mind of literary Ireland of the Gaelic movement.

Constantly recurring in the book are certain themes—Catholicism, semitism, alcohol, ribaldry, politics, music, foreigners whose presence suggests that these also are part of the vehicle of Joyce's satire and irony. They belong to Dublin. Joyce with his irony draws attention to them mocking some special feature in each. The priest at the funeral service hurries through his Latin, the men only wax eloquent through drink, many people profess an admiration for songs of the most sentimental nature. These things are revealed, and the bubble of their illusion broken. *Ulysses* contains perhaps two major themes. One, the representation of the characters of Bloom and Stephen for their own sakes, and two, the persistent satire of the mind and life and dreams of Dublin. It is to achieve the latter that the crowds of miscellaneous people are brought in. *Ulysses* in this sense is a great democratic book. It is written in a spirit Walt Whitman would have loved and appreciated. Every character in the book belongs to the rank of ordinary people. For more than the novels of Wells does Joyce record the lives

of the man in the street, the common people. Despite the irony one feels that Joyce is sympathetic. There is no contempt in him as in Aldous Huxley's early work, there is no false sentiment. It is clean frank writing about people whose lives have rarely if ever been revealed before in England, where literature and especially fiction tends to be snobbish.

Finally we come to the mystery of the title. Why *Ulysses*? What is there of Homer's Ulysses here, or of Shakespeare's, or of Tennyson's? Who is the Ulysses of the book? The very name connotes wisdom, experience, travel, old age. *Ulysses* is a novel of a day, none of the characters are remarkable for their age or wisdom, none of them have had much experience of the diversity of life through foreign travel. None of the characters resemble Homer's Ulysses, the fine cunning warrior. None of them resemble that bold pioneer whom Tennyson has described. The only connection between this book and the Ulysses of Shakespeare is that the latter lives in a world of baseness, treachery, pomposity, and youthful enthusiasm and foolishness. There is a certain similarity between the satire of *Troilus and Cressida* and the satire of *Ulysses*. Of both the worlds revealed one might say with Thersites that "All is lechery." It seems possible to us that the title refers back to the play. If it does not then we can only assume that just as the Ulysses of Ithaca voyaged through time and space in the great Odyssey, so does Joyce voyage through the mind and heart of all Dublin, intrepidly exploring every dark crevice and corner. In conclusion one must not dismiss as impossible the idea that the title may just be a joke—a sort of Shakespearean What You Will or As You Like It. We find this difficult to believe for several reasons. Firstly it is possible to explain the title on other grounds as we have done. Secondly both the preceding and subsequent novels of Joyce contain intelligible titles, the inference being that this novel also is intelligent. Thirdly and this to us is the most convincing of all reasons *Ulysses* is too great a book to be presented to the world with a meaningless title. It is written with such sincerity, such

power, and such high seriousness withal that we cannot believe it to be so heralded. *Ulysses* is a great novel. As we read it no doubt there arise difficulties, but in the obscurest passage and in face of the strangest neologisms one feels a sense of power. It does not rank with the outstanding novels of the twentieth century, it takes its place at once with the great books of the world. It has epic quality and so rightly stands in the same line with Homer's works.

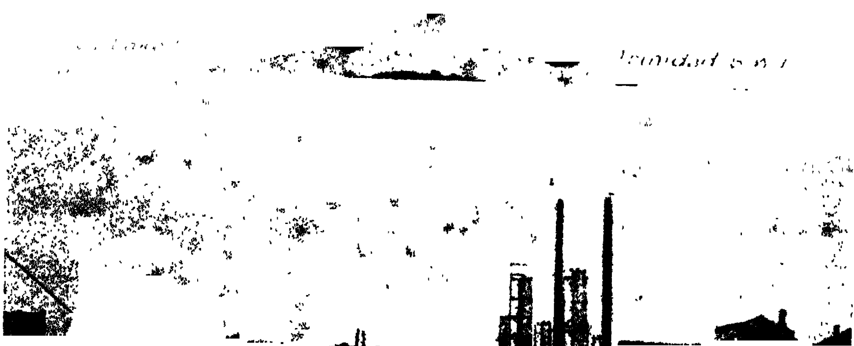


TRINIDAD, SUGAR CANE IN BLOOM.





Trinidad B.W.I.



Oil Refinery Trinidad B.W.I.

INDIANS IN CAIRI OR IERE IN TRINIDAD

MANOHAR R. RAMPERSAD

A lovely little island surrounded by the deep blue waters of the Atlantic Ocean, the Caribbean Sea, Columbus Channel and the Gulf of Paria, coloured by beautiful vegetation, foliage and flowers of the tropics, and having a pleasant climate of average temperature 84°F. day, and 74°F. night, charmingly stands on the north-eastern corner of South America.

Not very long ago it passed romantically into the hands of the British from those of the Spaniards who were the first Europeans to own Iere. Under the Spaniards the island had made little progress, and the handsome towns—Port-of-Spain, San Fernando, Arima and Princes Town-were mere villages. When the British took it from the Spaniards it had a population of 18,000 which has to-day increased to nearly 700,000.

In almost every part of this charming little island there can be seen to-day signs of a busy and prosperous life. Smiling cacao estates greet the eye everywhere. The sugarcane, with its graceful plume-like flowers and long bladed leaves, wave gaily to the soft breeze. Amid the vast fields on which this valuable plant is cultivated are seen active mills with tall chimneys puffing pretty smoke curls; they make from this cane the nice crystal sugar universally so much liked. Here and there the eye rests with pleasure on large groves of the majestic coco-palm, commonly called the cocoanut tree; the tall slender trunks of which are richly crowned with long feathery branches and heavily laden with the sweet watered nuts. All parts of it are connected with railways and motor roads, due to which travelling and transport have been made easy. The commerce of the island is marching by leaps and bounds. The digging of Asphalt and the mining of Petroleum in the southern districts of the island have done a great deal for the improvement of the island's exports. Both American

and English capital has been invested for this cause, and the people have gained much from it. Although there is no gold mines to tempt fortune-seekers, yet people from all parts of the world are constantly streaming to the "Land of the Humming Bird," as to a real El Dorado. Her ports are closed against none; she is ever ready to give a hearty welcome to all. The laws are respected; social grades are kept within healthy bounds; and what is best and most to be prized as the island's greatest blessing, is the harmony which prevails among all classes. Truly Trinidad is a land of peace, contentment and happiness.

So much for general information about the island, and now I shall endeavour to give a sketch of the life of the Indians, i.e., the East Indians who went during the last one hundredand more years, mostly as immigrants and some as adventurers.

The abolition of slavery on the 1st of August 1838 brought about a radical change in the labour market. The sugar estates were thrown out of gear, as labour became scarce, and ruin threatened them on all sides. At this time Lord Harris was the governor of the island; to save the situation he introduced the immigration of East Indians who have to-day become the chief inhabitants of the island.

Indians are a people who love a quiet, moral, economically independent and free life. To gain this they exert all their energy and are very often successful in it.

These immigrants who went to Trinidad, came from all grades of social order in India. The majority of them were from the middle class and they were out to seek fortune. They left their homes in India due to many causes; some disgusted of stagnant home life, some tired of domestic drugery under an elder brother, some were thrown out by their community for violation of some social rule and some among them were run-away lovers while others were the victims of Dalals who were employed by the officers at the Calcutta Immigration office.

Among them were all castes of people, but they were all immigrants and thus they were equal in at least one respect. The seed of equality was sown which has to-day developed into a respect for the man and not his caste.

A law provided these immigrants, after they had finished their term of five years service to their employer, with facilities for either settling down as citizens of the place or returning to India at a very, low cost for which the Immigration Department was responsible. As the majority of them had left their homes and community under serious circumstances, they preferred to settle down. It is their descendants who chiefly form the Indian population of the Island. Those who went as free adventurers also settled down and engaged themselves in business and agriculture as the others.

Before 1901 Crown lands were sold permanently under the Old Ordinance at ten shillings per acre, and these Indians who had finished their terms and had saved some capital from their earnings, bought lands. Nearly all the north-eastern, central and southern districts lands are owned by Indians. They cultivated these lands and became the chief agriculturists of the island.

Those of the people who lived a care-free life, and did not save money and buy lands, settled down as labourers on the sugarcane and cacao estates.

Thus the East Indians became the respected citizens of the land. Economically well off and with a prestige they started earnestly to make Iere their home.

These men after they were settled began thinking seriously of their religion, culture, customs and manners which they had taken along with them ; but had not thought of it yet. Among them were people of the Hindu and the Muslim faiths. There were more of the Hindu faith than of the Muslim faith. But as they were living and had lived under the same circumstances, their feelings for each other were friendly, thus resulting in a social harmony which became stronger everyday. The government too, has done nothing to break this friendly life of both

these communities. Later on the Christian missionaries began their educational and social work and many Indians of both Hindu and Muslim faiths embraced the Christian religion. Unlike India where only the depressed classes and untouchables became Christians, in Trinidad people of the higher classes took to Christianity. So there are now Indian Christians, Muslims and Hindus all living on friendly terms.

In their mode of living very little change has taken place. The men have taken to western dress but the women still maintain their own dress. They wear saris and lahanga. They take both vegetarian and non-vegetarian food.

Their marriages are performed in the manner it is done in India. The Hindus marry as the Hindus of India marry, careful not to have inter-caste marriages. The Muslims too marry according to their own customs, but the Christians have taken to European customs of marriage.

There is little difference in their modes of living and one cannot distinguish between a Hindu, a Muslim and a Christian, which is which. They are so much alike.

The language that is mostly used is English. Hindustani is spoken by those Indians who live in the rural areas, but all know a little bit of it, even those who were born and brought up in the towns without much contact with the Hindustani-speaking people. Under the Spanish rule a very strong French element was present in the language of the place, and so *Patouis* was spoken by the people. Patouir is changed French, the change is in the pronounciation and of some words. The Indians had picked up this language and even to-day, when English is so much spoken, some speak Patouir.

There is little hope for Hindustani to survive long, for the younger generations are loosing touch with it and even in homes where the parents speak Hindustani, English is the language of the young ones. It seems nothing can be done to make it survive except that it is made as a compulsory language for all Indians in elementary, middle or secondary schools.

And as education is made compulsory for all under sixteen years of age in this island, the attempt will surely be successful. Some ambitious and progressive young men once started a national school in which both Hindi and Urdu were taught. But it failed when an Arya Samaj missionary went and created a religious disharmony among the Hindus, Muslims and Christians who were working together. One thing was achieved by this attempt and that is, Hindi and Urdu got a place in the curriculum of all Government Schools. The denominational government-aided institutions have not yet accepted it in their curriculum.

Some people here indulge in the false notion, that Indians in Trinidad are deprived of political freedom. I make this statement from my reading several times articles appearing in a few of the daily papers here, written by people who seem to have very little knowledge of conditions over there. And what they have too, is mis-interpreted information. Trinidad has a Colonial form of Government, unlike that of South Africa where there are white immigrants as well. There is no competitions and the superiority and inferiority complexes which are present in South Africa among the whites and the Indians. In Trinidad Negro slaves came first, then Chinese labourers and lastly Indians went. It is these people who are the citizens of the place. The small white population of businessmen and land-owners could not have the audacity to claim for themselves any special right. Thus the political life of all Trinidadians, be he of Indian, Chinese, white or negro descent, is the same. The law is for one and all the same. Yes! this is true, that each community is allowed to follow its own customs and religious beliefs without involving the government laws. The government does not allow any special concession to any particular community. Such a step would be very unwise for the Government. Surely it would be at the cost of the harmony which exists among the people.

The Indians in Trinidad live in economic independence, owing nearly three-fourths of the land and being the chief

agriculturists of the land, their social unity and friendly relations with all the communities make life happy for them. They are respected by all the other communities as a people of prestige, and thus there are seven Indians representing all classes in the Legislative Council. At the time of election there is no question of a candidate's community. All vote for a candidate according to his merit for the position he seeks to occupy.

One feels extremely disgusted with human life on seeing people here, belonging to the same nationality, cutting each other's throats like cannibals to satisfy their egotistic desires. It reminds him of a land where people of all races and colours live in harmony. He longs to get there to breathe the fresh air of friendship and brotherliness.

HINTS FOR ESSAYS ON CONICS

Dr. B. Mohan, M.A., Ph.D.

I. The three systems of co-ordinates

(1) The necessity of co-ordinates

(2) Cartesian System—Abscissa, Ordinate, Axes of Reference, Origin.

(3) Oblique System

(4) Relation between the two

(5) Polar Co-ordinates—Pole, Initial line, Radius Vector, Vectorial Angle

(6) The same point may have many pairs of polar co-ordinates

(7) Relations between Cartesian and Polar Systems

(8) Transformation of Cartesian into Polar equations and vice versa.

II. Transformation of Axes

(1) Change of origin without change of axes

(2) Change of axes without change of origin

(3) The General Transformation

(4) Particular cases

(i) $\omega = \frac{\pi}{2}$

(ii) $\omega' = \frac{\pi}{2}$

(iii) $\omega = \omega' = \frac{\pi}{2}$

(5) The degree of an equation is not altered by any change of axes

(6) Invariants

$$\frac{a+b-2h\cos\omega}{\text{Sin}^2\omega} = \frac{a'+b'-2h'\cos\omega'}{\text{Sin}^2\omega'}$$

and
$$\frac{ab-h^2}{\text{Sin}^2\omega} = \frac{a'b'-h'^2}{\text{Sin}^2\omega'}$$

When $\omega = \omega' = \frac{\pi}{2}$, these equations become

$$a+b=a'+b'$$

and
$$ab-h^2=a'b'-h'^2$$

(7) The use of transformation.

III. Co-axal and Orthogonal Circles (1940)

(1) The Radical Axis of two circles : its equation
(2) Equation to Co-axal Circles
(3) Limiting points of a Co-axal System
(4) Condition of orthogonality of two circles
(5) Orthogonal system—
(i) The centre of the orthogonal ⊙ lies on the R. A. of the Co-axal System
(ii) The radius is the tangent from the centre to any ⊙ of the Co-axal System
(iii) Each ⊙ of the orthogonal system passes through the limiting points of the Co-axal System
(iv) The two systems are inter-changeable, i.e. each system is orthogonal to the other
(v) One of the two systems is of the Intersecting Species, the other of the Non-intersecting Species.

IV. Conjugate Diameters of an Ellipse

(1) The locus of middle points of parallel chords is a diameter
(2) $mm' = -\frac{b^2}{a^2}$; definition of Conjugate Diameters
(3) Tangent at the extremity of any diameter || chords it bisects
(4) Geometrical construction for conjugate diameters
(5) $\phi - \phi' = \pm\frac{\pi}{2}$.
(6) The sum of the squares of two conjugate semi-diameters is constant
(7) The area of the parallelogram formed by tangents at the ends of conjugate diameters is constant
(8) The acute angle between conjugate diameters is least when they are equal
(9) Equation to Equi-conjugate diameters

(10) Equation to the ellipse referred to two conjugate diameters as axes
Modification when the diameters are equi-conjugate

(11) Any two supplemental chords of an ellipses || a pair of conjugate diameters.

V. The Asymptotes of a Hyperbola

(1) Definition of an Asymptote
(2) Equations to the Asymptotes
(3) Geometrical construction for the asymptotes
(4) Conjugate Hyperbola
(5) Relations between the equations to the three
(6) Equation to a Hyperbola referred to the Asymptotes as axes
(7) Interpretation of the equation

$$(Ax+By+C)\,(A'x+B'y+C')=\lambda$$

VI. The Rectangular Hyperbola

(1) Definition of an Equilateral Hyperbola :

$$b=a\,;\; e=\sqrt{2}$$

(2) The name "Rectangular Hyperbola"
(3) Equation to the Rectangular Hyperbola
(4) Condition that the General Equation of the Second Degree should represent a Rectangular Hyperbola.
(5) All conics passing through the intersections of two Rectangular Hyperbolas are Rectangular Hyperbolas.
(6) If two rectangular hyperbolas intersect in four points, each point is the ortho-centre of the △ formed by the other three
(7) If a rectangular hyperbola circumscribe *a* △, it passes through its ortho-centre

VII. The Polar Equation to a Conic

(1) The Polar Equation
(2) To trace the Conic $\frac{l}{r}=1-e\cos\theta$
(3) Equations to the Directricies
(4) Equations to the Asymptotes

(5) Modifications when the Major Axis of the conic is inclined to the x-axis.

VIII. The General Equation of the Second Degree (1935,1938)

(1) Different kinds of Conic Sections

(2) Interpretation of the Equation

(3) Equation to the Asymptotes

(4) Conditions for different conics :

Conic	Conditions	
(a) Parabola	$h^2=ab$;	$\Delta\neq 0$
(b) Ellipse	$h^2<ab$;	$\Delta\neq 0$
(c) Circle	$a=b,\ h=o$;	$\Delta\neq 0$
(d) Hyperbola	$h^2>ab$;	$\Delta\neq 0$
(e) Rectangular Hyperbola	$a+b=0$;	$\Delta\neq 0$
(f) Two real, intersecting st. lines	$h^2>ab$;	$\Delta=0$
(g) Two st. lines ⊥	$a+b=0$;	$\Delta=0$
(h) Two parallel st. lines	$h^2=ab$; i.e. $\frac{a}{h}=\frac{h}{b}=\frac{g}{f}$	$\Delta=0$
(i) Two coincident st. lines	$h^2=ab,\ g^2=ac,\ f^2=bc$	
(j) Two imaginery st. lines	$h^2<ab$;	$\Delta=0$

IX. The Equation $S=\lambda\, uv$ (1935)

(1) The general interpretation

(2) Particular cases

(i) $wt=\lambda\, uv$; Geometrical interpretation

(ii) $u=0$ and $v=0$ intersect on the conic $S=0$

(iii) $S=\lambda u^2$

(iv) $vw=\lambda u^2$

(v) $u=0$ becomes a tangent to $S=0$

(vi) Three coincident points

(vii) Four coincident points

(viii) $S=\lambda u$

Example : Any two circles intersect at two points on the line at Infinity ; Circular Pointsat Infinity.

(ix) $u=0$ becomes a tangent to $S=0$ in (viii)

(x) $S=\lambda$

Example: Two concentric circles have double contact with each other on the Line at Infinity.

X. The Equation $S=\lambda S'$

(1) The interpretation

(2) Same as VI (5)

(3) Same as IX (2).

XI. Circular Points at Infinity (1938)

(1) Same as IX (2) (viii)

(2) Same as IX (2) (x)

(3) Equation to the imaginery tangents to a conic from its foci

(4) How to find the foci of a conic.

XII. Conics through five given points

(1) If no four of the points are collinear, one, and only one, conic passes through them

(2) If three of the points are collinear, the conic is a pair of st. lines

(3) If four of the points are collinear, an infinity of conics passes through them, all of them being pairs of st. lines.

XIII. Conics through four given points. (1940)

(1) An infinity of conics passes through the points

If three of the points are collinear, all the conics are pairs of straight lines

When no three of the points A, B, C, D are collinear

(2) Two real or imaginery parabolas pass through the points.

(3) All conics of the system have a pair of conjugate Diameters parallel to the axes of the two parabolas.

(4) The Centre-Locus of the conics is a conic.

(5) The asymptotes of the Centre-Locus are parallel to the axes of the two parabolas.

(6) The Centre-Locus is the Nine-Point Conic of the four points.

(7) The centre of the Nine-Point Conic is the centroid of the four points.

(8) If the points are concyclic, the Centre-Locus is a Rect. Hyperbola.

(9) If $aa' = -bb'$ and the line joining two of the pts. is perp. to that joining the other two, all conics are Rect. Hyperbolas. D becomes the Ortho-centre of △ABC and the Centre-Locus becomes the Nine-Point Circle of the △

(10) The asymptotes of any of the conics are par[l] to conjugate diameters of the Centre-Locus

In particular, the asymptotes of the rect. hyperbola through the pts. are par[l] to the axes of the Centre-Locus

(11) The polar of a fixed pt. with respect to the system passes thro' a fixed pt.

(12) The locus of the poles of a fixed st. line with respect to the system is a conic

(13) If BA, CD meet in P, AC, BD in Q and AD, BC in R, △PQR is Self-Polar with respect to any conic of the system.

XIV. Conics touching four straight lines

(1) An infinite number of conics may be inscribed in a quadrilateral.

(2) The △ formed by the diagonals of the quadl. is Self-Polar with respect to any conic of the system.

(3) The Centre-Locus of the system is the st. line joining the mid. pts. of the diagonals.

XV. Co-normal Points on a central conic.

(1) Four normals may be drawn from a given pt. to a Central Conic, their feet lying on a Rect. Hyper.

(2) The Rect. Hyperbola passes thro' the centre of the conic and the given pt.

(3) The asymptotes of the Rect. Hyperbola are par[l] to the axes of the conic.

(4) Conditions that the pts. of intersection of two st. lines with the conic may be co-normal.

(5) If the Eccentric <s of four co-normal pts. on an Ellipse be α, β, γ, δ, then

$$\alpha+\beta+\gamma+\delta=(2n+1)\pi,$$

and $\sin(\beta+\gamma)+\sin(\gamma+\alpha)+\sin(\alpha+\beta)=0$

XVI. Confocal Central Conics (1935)

(1) Equation to the conics confocal to

$$\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$$

(2) To trace the conic

$$\frac{x^2}{a^2+\lambda}+\frac{y^2}{b^2+\lambda}=1$$

(3) Two conics of the system pass thro' a given pt.; one of the two is an ellipse, the other a hyper.

(4) One, and only one conic of the system, touches a given st. line.

(5) Two confocals intersect ⊥ at all their common pts. Of two intersecting conics, one is an ellipse, the other a hyper.

(6) The difference of squares of perps. from the centre on any two par[l] tangents to two given confocals is constant

(7) If a tangent to one of two confocals ⊥ a tangent to the other, the locus of their pt. of intersection is a ⊙

(8) The locus of the pole of a given st. line with respect to the system is a st. line which is a normal to that confocal which the st. line touches.

(9) The two conics

$$ax^2+2hxy+by^2=1,$$
$$a'x^2+2h'xy+b'y^2=1$$

can be placed so as to be confocal if

$$\frac{(a-b)^2+4h^2}{(ab-h^2)^2}=\frac{(a'-b')^2+4h'^2}{(a'b'-h'^2)^2}$$

XVII. Confocal Parabolas.

(1) Equation to the system:

$$y^2 = 4a(x+a) \qquad \text{(origin focus)}$$

(2) One, and only one, confocal of the system touches a given st. line.

(3) Two confocals which have their axes in the opposite directions intersect $\perp$.

(4) If a tangent to one of two confocals $\perp$ a tangent to the other, the locus of the pt. of intersection is a st. line.

IN DEFENCE OF INSOMNIA

OR

SLEEP AND CIVILIZATION

N. M. KULKARNI, M.A.

An acquaintance of mine, a Professor addressed as Dozing Dufferson in intimate circles, once pointed out to me a piece of newspaper advertisement inserted by a firm of bedstead makers. It is seldom that commercial advertisements are credited with anything like thought-provoking sentiments. Seldom does trade condescend to deal directly with the Muses, but in our own era of specialization and professional expertness we do now and then come across with specimens of the art of the advertiser that testify to the presence of a type of genius that we often associate with poets and philosophers. The specimen my friend showed me was evidently one of such, and he was one of those end-to-end readers of close-printed dailies whose voracious literacy is so often made the butt of common ridicule; but one never knows what one might not miss even in the undoubtedly economic art of intelligent skipping. I do not, however, propose to defend such indiscriminate poring over the papers. This is only a defence of insomnia and an encomium on its undoubted, though rarely admitted, benevolent and civilizing influences. My friend told me that he had taken to reading advertisements when he was engaged, as he put it, in the unholy task of killing some impertinent hours between two very pertinent periods of his teaching profession! Some old journal or other was picked up (he said) and the energetic mind of the professor did some sort of intellectual gallivanting with any printed stuff whose only virtue was its being different from the eternal texts that he was paid to profess teaching. We can imagine the scene and situation. The professor goes lazily through the readable stuff of the journal and when that is done with and there was yet some time to be killed, he would inevitably plod through the notices and

advertisements when, lo and behold, his attention would be riveted with a heavy-typed heading of some Firm's advertisement, not to be neglected. The Firm evidently employs an expert intelligence whose tempting powers seem to be on a par with those of the Prince of Darkness himself. So, at any rate, was the expert's whose specimen of advertising was contained in the piece that my friend pointed out to me. The Firm in question happened to cater for the comforts and amenities of the bed-rooms of civilised people. The advertisement itself, shown below, seems quite innocent in itself as all Satan's temptations apparently do. But listen:

"Be Sure You Buy Our BURLINGTON Bedsteads!
Beware of Imitations!
Insist on 'BURLINGTON', and Remember
You spend half a life-time in beds!"

That is advertising, if anything. The professor who was inclined to sleep as he was reading this voice from the Lethean shores becomes wide awake when he is made thus to remember that he is sleeping the better part of his life-time. Surely, he muses, the Americans (the advertisement was from an American expert) must be leading in everything. Only an inveterate hater of sleep could resist the blessed prospect of lying on Burlington bedsteads; so subtle and plausibly convincing is the art of the advertiser. The average citizen, the professor thinks, mindful of the fact that half his life is emphatically spent in his bed would certainly prefer to buy a Burlington the next time he is inclined to refurnish his bedrooms. The reminder in the advertisement is colossal in its implications. One naturally begins to believe in the popular division of lies into white, black and superlative, the last being that form of lie which is supported by statistics, an illustration of which is very nearly found in the specimen of advertisement given above.

Assuming, I thought, that the optimistic estate of individual human life is a hundred years, what is one to say of a civilization that could easily afford to earmark a span of fifty

years for no other purpose than that of sleeping it off? The implied complacency of it all is staggering indeed. Man, we know, sleeps contentedly only when his head lies easy, which means that he has done all that he ever expected to do in this world. Sleep never blesses him who has something to accomplish, some cown of glory to strive for and achieve. And one can only say that a civilization that not only permits but encourages with 'Burlingtons' an easy approach to the Leathean shores has done the last deed on this earth and has done with it. Perhaps America, one fancies, has done its bit and so could afford to indulge happily in Burlington bedsteads, considering her unwillingness to join the League of Nations in the past, and her sleeping over the European war in the present. That may well be so, but what is one to say about the rest of mankind? Have they, too, arrived in their life at a point in their civilization when they could afford blissfully to sleep the better part of their lives? Is it really a fact that we all do sleep, or attempt to sleep, during half the period of our precarious tenure of earthly existence? The answer seems to be yes, considering that we all do nothing in particular at night, the time that we have set apart for sleep. If this be so, could we legitimately afford to complain of the shortcomings of the present civilization since we are all sleeping over it, preferably in Burlingtons?

When we remember that civilization worth the name has always been the result of the contribution of those who have burnt their midnight oil—a telling phrase—in the contemplation of the good, the beautiful and the true, the case for insomnia gains good ground. If these forbears of the modern friends of insomnia had peacefully slept off their fifty years, one wonders where Homo Sapiens would have travelled to-day! No doubt all great poets have sung lyrically on the subject of balmy sleep. But then poets, as a wit said, excel in fiction. They blatantly belie their professions of loyalty to sleep when we find them passing sleepless nights in striving to compose their poems. Where would all their poetry be, one wonders,

if, sincere in their encomiums of sleep, they had one and all succumbed to the lures of the sweet vision and gone to sleep over their verses !

Macbeth worried over having murdered sleep, but then we know, Macbeth had murdered Duncan, too. And it is sad to reflect that the murder was the result, if in part at least, of the sound and snoring sleep of the grooms who were supposed to guard the person of their unfortunate king. Shakespeare, it would seem, had no soft corner in his heart for sleep. He has made all those characters who would sleep extremely regret having slept. The instance of Duncan's grooms apart, we may note the destiny of Hamlet's father who was poisoned while sleeping, of Imogen whose sleep helped Iachimo to mark the mole on her breast with disastrous consequences to her; and if these illustrations are too tragic, we might as well note the comic destiny of the lovers in *A Midsummer Night's Dream*. What a translation of Bottom and his company ! And all because they could not keep awake when the mischief was being played. No, it will not do to doze when dangers are never sleeping. One has to keep watchful, has to remain open-eyed and ever awake if one could hope to keep free from the powers of the Prince of Darkness and Night—the usual time for sleep.

Charles Lamb, with his customary sophistry, writes feelingly of those who court sleep; and he argues that by such daily doses of the Leathean waters mortals familiarise with death which is the sleep from which none awakes. But why familiarise with death while living? It is a defeatist philosophy which accepts the inevitable. Man's glory has consisted, and will always consist, in his unending fight with the inevitable. How pathetic indeed to observe that man with all his daily voluntary courting of sleep is yet unwilling, when the time for the sleep eternal is approaching, to accept the substance whose shadow he has been ever praying for. No, this is not the way of conquering death—by courting his brother. One should go to Lamb's master, that incomparable author of *Religio Medici*, in order fully to appreciate the relation of sleep to

death. In a passage where Browne is comparing sleep and death, he says:

> "It is that death by which we may be literally said to die daily; a death which Adam died before his mortality....In fine, so like death, I dare not trust it without my prayers and a half adieu unto the world."

And addressing God, his Maker, he sings:

"Thou whose nature cannot sleep,
On my temples sentry keep;
Gaurd me against those watchful foes
Whose eyes are open while mine close."

And Browne laments:

"These are my drowsie days, in vain
I do now wake to sleep again;
O come that hour, when I shall never
Sleep again, but wake for ever."

That, I suppose, is what all of us should pray for if we are to do our bit towards civilization.

Nature never sleeps but on Doomsday. The elements are eternally awake and woe unto the day when these cease to do so. As Keats puts it in his own admirable way, realising both truth and beauty of which he was the poet *par ecxellence,* the elements are seen to be

"....watching with eternal lids apart,
Like Nature's patient, sleepless Eremite,
The moving waters at their priest-like task
Of pure ablution round Earth's human shores."

If it be said that Keats did not wish to stand (which is true) in lone splendour doing all that is said in these lines, the criticism is not sound because he wished to be only more steadfast than the star he addresses in the sonnet. Such is Nature. And man, the child of Nature, was never intended to be a sleeper for as long as half his precariously brief tenure on this earth. The wise have never slept. It was this truth that the wise men of the East saw when they wrote in their "Lord's Song"

that the true seer keeps awake while the whole of creation sleeps.

Sleep, we know, is the privilege of children. They grow, it is true, when they sleep soundly. Babies do sleep for the best part of their babyhood. And so undoubtedly it was with the babyhood of Homo Sapiens when, having no knowledge of his environment, he slept very soundly in, of course, a metaphorical sense. But to continue to do so even on his entry into the adult stage....or, is it that we have never gone so far? And that the reason why we advertise for Burlingtons?

There is, however, nothing absolutely useless in this world. Even sleep has its uses; but its place is just for those who are a menace to civilization. Science, I fancy, could do nothing more creditable than to invent some soporific that could induce the sleep eternal which will be the most reliable safeguard of civilization and cultured existence. For then means might be found of administering this deadly dose to the modern enemies of Peace and civilised life—those Dictators whom apparently no weapon has been found capable of defeating. No weapon in the list of modern armaments, I submit, could be half as decisive as a highly synthetic Morphian pill. Of course there is the proverbial contingency of belling the cat, for Dictators are not so easily available for this kind of treatment, but there is no harm in trying.

In fact, fantastic as this fancy might appear, such a weapon of somnolence was practically employed against the enemies of Peace at a period of pre-historic India that parallels our own to-day. The Eastern legend has it that the people of India were once on a time greatly harassed by two very powerful demon brothers, named Ravana, the legendary king of Ceylon, and Kumbhakarna, his brother. The victimised people approached the priestly class who with their usual powers of accurate thinking (which were quite unusual) devised a plan which elicits our heart-felt admiration even in our own day. They went to the Godess of Learning and prayed her to have

a momentary truce with Kumbhakarna, the brother demon of the king, so that when the time came for him to beg a boon from Lord Shiva whom the demon was devotional enough to placate, he would pray for nothing more than the unassailable privilege of sound and undisturbed sleep over a long, long stretch of time. The reason why the people were so anxious to get rid of this brother demon of the king was that this demon, to compare small things with great, was in the habit of eating like a caterpillar, and the only thing that he was doing in his waking moments was to swallow all the available food stuff in the kingdom, vegetarian or otherwise, so that the people were always existing in a condition of perpetual famine. So they saw to it that the demon who ate like a caterpillar was also compelled to sleep like a dormouse ! That was how the ancients liquidated their oppressor, for, having no longer the presence of the Godess of Learning on his tongue (to use the Eastern imagery) the demon could ask his Deity for nothing better, and he got what he begged. From that time on, the legend goes, this demon slept soundly to the exquisite relief of all. His momentary wakings were very few and far between, and his depredations at such times were no more unendurable than some occasional natural calamities. But there was one mistake which the people made. So greatly relieved were they from the tyranny of the 'caterpillar cum dormouse' demon that they either forgot or somehow failed to treat in the same way the other brother demon, the legendary king of Lanka. And it is not altogether fanciful to trace the cause of all modern Dictators directly to that mistake of our ancestors. But we can learn by experience, and since we are sceptical about supernatural agencies we may as well look for science for conferring on civilization a drug that would do to the enemies of culture in the present what the Godess of Learning is credited with having done to their age old forbears. Imagine Hitler peacefully snoring over his Burlington !

Sleep, we are told, is to be welcomed on the ground that it brings rest and repose to the human system. But rest and

repose are relative terms, and to sleep, we assume, is to do away with monotony that brings in a disinclination to do anything. And so, at any rate, one takes to sleep. If one could avoid this sense of monotony in life by endeavouring so to engage oneself as to induce a perpetual interest in one's activities, it is easy to see that sleep might be done with. For sleep can only mean absence of any interest and curiosity. One tries in sleeping to forget one's dull and dreary routine of daily activity. If life is so regulated that there is no dulness there is no call for sleep. We find people keeping bed-side books of light-reading and the reason for such a choice of books is obvious. One never sleeps when one reads a serious book. Such a book would keep the mind alert and active. One is teased out of one's habitual complacency and one's intellectual belligerence keeps one awake. In a contribution to *Punch* entitled, 'The Legend of Jawbrahim-Heraudee', Thackeray long ago narrated the anecdote of a literary competition that illustrates admirably the sort of want of interest that inevitably induces sleep. Lovers of *Punch* need hardly be reminded how the Oriental Poet cum Potentate, Poof-Allee, used to defeat all rivals by listening to their verses and accusing them with plagiarism by reciting *verbatim* all that they had uttered—a trick that Poof-Allee was able to play upon his poor rivals because he had the quickest and most retentive memory by which he was able to reproduce anything by listening only once. However, Poof-Allee was soon defeated when Jawbrahim-Heraudee entered the competition, and recited his 'didactic, enclytic, aesthetic, in a word, synthetic piece, on the harmony of the sensible and moral worlds, and the symbolical schools of religion.' So long and unending was this 'little piece' of 'The Descent into Jericho', that it was recited for no less a length of time than forty-eight hours and Poof-Allee was found profoundly snoring over the recitation, and when he woke up it was only the 40th canto that he was told he was listening to. To cut a long story short, Jawbrahim won because Poof-Allee could never dare deny originality to such an aboriginal poem, and since he had slept over the better

half of the poem which was worse enough, he was unable to recite it by himself and so lost the poetic position that he was till then enjoying unchallenged.

The moral of all this is simple enough. If one is able to abolish books of the type composed by Jawbrahim, one might learn to decompose one's sleeping habit; one could so arrange one's hours that one's mind is eternally recreated and refreshed without having the customary recourse to rest and repose. Are we not told that culture is the outcome of a continued battle with custom? Intelligent lucubrations, inducing a form of inward rumination not different from insomnia, will bring about a state of consciousness that parallels the image of the ceaseless poise and calm of the spinning top,—a consummation devoutly to be wished.

All which is a mere roundabout way of admitting the indubitable fact that civilization is the cumulative contribution of a group of human beings who evidently suffered from insomnia, but who nevertheless did not regard it as a dreadful malady to be eradicated at any price. When we ponder over these contributions to civilization we are surprised to observe that all these have been the result of but half the efforts and endeavours of mankind throughout the ages. If man has achieved his present civilised existence by banking upon only half the time at his disposal, the question naturally arises, what might he not achieve when he will make up his mind to abandon sleep and exploit it for the purposes of living a fuller life and richer?

Life, one is often reminded, is short, and art is long. But the long and short of it all is that we rarely pause to consider the practical implications of such a wholesome reminder. If life is emphatically short, where lies the wisdom of making it yet shorter by sleeping away a whole half of it? Time enough to sleep, the lad of Shropshire is reminded, when the journey's over. And the poet of *Lotos-eaters* found it needful to write *Ulysses*—the type of all those who would follow knowledge like a sinking star, never ceasing to strive, to seek, to find and never

to yield to the charming vision of oblivion that is for ever sleep. No, the time has come to be up and doing at all times, to keep eternally vigilant and awake, to banish sleep and Burlingtons.... We may, at any rate, begin with a modest limitation of sleep. When the Jesuits settled the plan of education, tells Bishop Butler, in the College of Clermont, the physicians were consulted on the portion of time which the students should be allowed for sleep. They declared (I think, wisely) that five hours were sufficient, six an abundant allowance, and seven as much as a youthful constitution could bear without injury. I think the modern world has survived the injustice with which it once estimated the principles of Loyola, and that we might with impunity begin to adopt the sage counsels that the Jesuit physicians recommended, even though, or perhaps because, it might lead us all into the coils of the dreaded insomnia. And we might one day be able to diminish the hours of sleep to the proposed minimum—which is nil.

The notion that want of sleep is injurious to human health is due, one suspects, to the sly insinuation of interested parties among whom one might well include the sponsers of Burlington bedsteads. The advertiser no doubt scored a good point because few, if any, will resist his offer, but in one instance at least, his ingenuity overreached itself. My Professor friend—Dozing Dufferson—told me that the point of the advertising artist was so well driven home indeed that it stabbed even his sleep (a point worth remembering) during that night as he lay ruminating over what seemed to him to be the colossal implications which I have tried to record in this piece. But I think I must not omit to mention here one other point as well. That is that no one should ever commit the mistake of imaging that my friend is suffering from insomnia, for he generously admitted that although he did not sleep that night, he compensated for it by doing one better. He slept, he confessed, over many of the periods that he was expected to profess lecturing. Could any of us be as frankly generous and just?

BENARES HINDU UNIVERSITY LIBRARY

ADDITIONS UP TO AUGUST 1941

GENERAL WORKS

'Bulletin of the Deccan college research institute', Poona. v1-2. [056-2B2

Surendranath DAS GUPTA. *A History of Indian Philosophy.* v. 3. [R 130.010A/3ab

MORGAN, J.J.B. *Psychology of the unadjusted school child.* 1937. [R 150.508/2

DEWEY, John. *Theory of valuation.* 1939. [170/167

COATES, Adrian. *A Basis of opinion.* 1938. [R160/123

'Sacred books of Hindus' tr by Nanda Lal Sinha. 1923. [850A.2/o5/6b

SIVANANDA. *Inspiring message for all.* 1941. [231/.182/1

CARLEN, M. C. *Guide to the encyclicals of the Roman pontiffs from Leo XIII to the present day.* 1939. [R260/044

Essay and general literature index, 1940. [016.838/9

Imperial council of agricultural research library, Delhi. *Classified list of reprints and pamphlets* (agricultural), 1936-1940. [016.623134

The Leader. 1938-1940. [057/L4 1938-40

Library Association, London. *Yearbook.* 1941. [020.6L69.1941

Indian library association, Calcutta. *Directory of Indian libraries.* [027.054I39

Madras—Government Oriental Manuscripts Library. *An Alphabetical index of Samskrit manuscripts, 1940.* [016.091M1B/2

United States National Museum. *Proceedings,* v. 89. [069.0973U58-1.89

Zoological record. v. 76. [R 016.59Z88

The Cambridge bibliography of English literature; ed. by F. W. Bateson. 1940. 4v. [R 016.82C2

TANNENBAUM, S. A. *Thomas Middleton* (a concise bibliography). 1940. [R 016.82E1/13

TANNENBAUM, S. A. *John Marston* (a concise bibliography). 1940. [R 016.82R1/14

KEYNES, Geoffrey. *John Evelyn,* a study in bibliophily and a bibliography of his writings. 1937. [R 016.82 K1

SHARP, H. A. *Cataloguing.* 1937. [025.3 S 53

JENKINSON, A. J. *What do boys and girls read?* 1940. [028J52

Encyclopaedia Britannica. [R 030 B3A/40

ROXBURG, J. F. *The Treasury of knowledge.* [R 030.9 T1

PHILOSOPHY

Surendra Nath DASGUPTA. *A History of Indian philosophy.* v3. [130.010A/3

Shishir K. MAITRA. *Sadhana of Bhagavadgita..* 1940. [130.088/4

COLLINS, B. A. *Death is not the end.* 1939. [150.620

RICHMOND, Kenneth. *Evidence of identity.* 1939. [150.621

CHAKRAVARTI, A. *Humanism and Indian thought.* 1937. [180/.253

Sanatana-dharma: an elementary textbook of Hindu religion and ethic. 1939. [231/.178/1-2

Angarika B. Govinda. *The Psychological attitude of early Buddhist philosophy* and its systematic representation according to Abhidhamma tradition. 1936-37. [240/.124

Where theosophy and science meet; ed. by D. D. Kanga. 1938-39. 4 Pts. [280/.406/1 4

LINDSAY, A. D. *The Historical Socrates and the platonic form of the good.* 1932. [110/360

CANNEY, M. A. *Newness of life.* 1928. [110/359

MURALY DHAR BANERJEE. *A Genetic history of the problems of philosophy* 1935. [120/096

Adhar Chandra DAS. *Sri Aurobindo and the future of mankind.* 1934. [130/175/5a

Anilbaran ROY. *Sri Aurobindo and the new age.* 1940. [130/175/9

Asutosh BHATTACHARYA Shastri. *Studies in post-Samkara dialectics.* 1936. [130/256

Susil Kumar MAITRA. *Madhva logic.* 1936. [130/257

Sures Chandra CHAKRAVARTI. *The Philosophy of the Upanishads.* 1935. [130/258

WEBB, C. C. J. *The Contribution of Christianity to ethics.* 1932. [170/164

VIRESWARANANDA, Swami. *Brhma-Sutras* with text. 1936. [850A4D/027

The Heritage of Kant; ed. by G. T. Whiteny and D. F. Bowers. 1939. [110/088J

The Philosophy of John Dewey; ed. by P. A. Schilpp. 1939. [110/195/8

ELLWOOD, C. A. *A History of social philosophy.* 1939. [120/097

Ganganatha Jha. *Shanker Vedanta.* 1939. [130/133/2

Jwala Prasad. *Indian epistemology.* 1939. [130/141/2

BON, B. H. *The Geeta : as a Chaitanyite reads it.* 1938. [130/259

SARADANANDA. *The Vedanta.* 1928. [130/258

SHARVANANDA. *The Religion and philosophy of the Geeta.* 1933. [130/259

Feilds of psychology; ed. by J. P. Guilford. 1940. [150/24

RATNER, Joseph, ed. *Intelligence in the modern world* : John Dewey's philosophy. 1939. [150/625

STEKEL, Wilhelm. *Technique of analytical psychotherapy* : tr. by Eden and Cedar Paul. 1940. [150/626

WHEELER, R. H. *The Science of psychology.* 1940. [150/627

WOODWORTH, R. S. *Psychological issues.* 1939. [150/286/6

DAKIN, A. H. *Man the measure.* 1939. [170/165

MUMFORD, Lewis. *Faith for living.* 1940. [170/166

ANDERSON, P. R. and Fisch, M. H. *Philosophy in America from the Puritans to James.* 1939. [120.098

LYTTELTON, Edith. *Some cases of prediction.* 1937. [150.628

RICHARDSON, L. F. *Generalized foreign politics.* 1939. [150.629

AVELINO, Andres. *Metafisica catagorical,* 1940. [140.216

MAITRA, S. K. *The Philosophy of Aurobindo,* 1941. [130/088/5

RAGHAVENDRACHAR, H. N. *The Dvaita philosophy and its place in the Vedanta,* 1941. [130/262

RELIGION

Pandharinath H. VALAVALKAR. *Hindu social institutions*; foreward by S. Radhakrishnan, 1939. [231.177

Ryukan KIMURA. *Historical study of the terms Hinayana and Mahayana and the origin of Mahayana Budhism.* 1927. [240.177

Nagendra N. GHOSE. *The Aryan trial in Iran and India,* 1937. [270.43

MACDONELL, A. A. *Lectures on comparative religion,* 1925. [205/104

MACINTOSH, D. C. *The Pilgrimage of faith in the world of modern thought,* 1931. 205/105

Paramasiva Iyer, T. *Ramayana and Lanka,* 1940. [860A/05

Abdul Haque Vidyarthi. *Mohammad in world scriptures,* 1940. [250/41

Sri Prakasa. *Annie Besant : as woman and as leader,* 1941. [280/093/9

Sanatana-dharma, 1939. [231/178/1-2

BAPAT, V. *Vimuttimagga and visudhimagga,* a comparative study, 1937. [240/125

GOKHALE, G. N. *Scientific religion,* 1930-32. 2v. [275/31e

HOCKING, W. E. *Living religions and a world faith,* 1940. [205.52H1

HADHAM, John. *God in a world at war.* [210.56

HADHAM, John. *Good God: sketches of his character and activities*, 1940. [210.57

The Bible of the world; ed. by R. O. Ballou and others, 1940. [275.40

'Sacred books of Hindus' *Vaiseshika Sutras of Kanada*, v. 6. [850A.2056b

SOCIOLOGY

Gurumukh Singh MONGIA. *Problem of crime*, 1940. [303.069

Anant S. ALTEKAR. *The Position of women in Hindu civilisation*, 1938. [305ALa

GOETZ, H. *The Crisis of Indian civilization in the 18th and early 19th centuries*, 1938. [311.145

THRUSTONE, L. L. *The Fundamental of statistics*, 1938. [311T54

KING, W. I. *The Elements of statistical method*, 1936. [311K54

ERNLE, R. E. P. 1st baron. *English farming, past and present*, 1931. [R 330A042

WILLCOCKS, William. *Lectures on the ancient system of irrigation in Bengal and its application to modern problems*, 1930. [331.291

MOGUIRE, E. B. *The British tariff system*, 1939. [R 333.131

SILVERMAN, H. A. *Economics of the industrial system*, 1931. [338S58

India—Imperial record department. *Index to the land revenue records*, 1837. [F111-IA3

Delhi—Reserve bank of India. *Agricultural credit department, statutory report.* [D1-38a

Report of the annual general meeting of shareholders, 1936-40. [D1-8c/1-6

Report on currency and finance, 1935-40. [,, 8b

U. P.—Finance department. *Annual report on the working of the local audit department*, 1938-39. [DIII45

DICEY, A. V. *Introduction to the law of the constitution*, 1939. [R343.05A

ACLAND, Richard. *Unser Kampf, our struggle*, 1940. [343.220

PALANDE, M. R. *Indian administration*, 1939. [352.121/1A

DALAL, M. N. *Whither minorities*, 1940. [352.243L

India—Foreign and political department. *Administration report of the Baluchistan agency for 1939.* [AII-1B1-1939

U.P.—General department. *Report on the administration, 1937-38.* [AII-1U1

SHAHANI, M. S. *Constitutional law of England*, 1939. [R 354.085 ; .08b

Hamid Ali. *Custom and law in Anglo-Muslim jurisprudence*, 1938.[365.3H2

Dinshah F. MULLA. *Principles of Mahammedan law*, 1938. [365.3M1E

Kashi Prasad SAKSENA. *Muslim law as administered in British India*, 1940. [365.381

Bihar—Department of Education. *Report on the progress of education in Bihar, 1938-39.* [I1-3/B2

India—Bureau of education. *Progress of education in India, 1932-37.* 2v. [I11-21/11/1-2

India—Department of commercial intelligence and statistics. *Statistical abstract for British India with statistics*, relating to certain Indian states, 1928-38. [J1-4/16a

Modern political doctrines; ed. by Alfred Zimmern, 1939. [340/.72

APPADORAI, A. *Revision of democracy*, 1940. [349.218

Shivaram, V. & Sharma, B.M. *Modern governments;* 2nd ed. 1940. [350/.34

PARKES, H. B. *Marxism*, 1940. [332/.013/32

Poland—Ministry for foreign affairs. *Official documents concerning Polish-German & Polish-Soviet relations*, 1933-1939. n.d. [343/.221

India's problem of her future constitution: All-India Muslim league Lahore resolution, popularly known as "Pakistan." n.d. [352/.244

ANJARIA, J. J. *Nature and grounds of political obligation in the Hindu state*, 1935. [942/211

Pratapagiri Ramamurti. *The Problem of the Indian polity*, 1935. [942.210

Shivaram, V. & Brijmohan Sharma. *India and the League of Nations*, 1932. [343/.14/28

Balkrishna Madan. *India and imperial preference*, 1939. [331/.292

India—Economic adviser. *Studies in Indian economics.* [E1-1/58

India—Department of industries and labour. *Statistics of factories,* subject to the factories act, 1934 (XXV of 1934) with a note on the working of the factories, 1937. [E1-5A/1

Bulletins. No. 66 (24th session of International labour conference, June, 1938). [E1-1/20/66

LEWIS, W. A. *Economic problems of to-day,* 1940. [337/.187

PIGOU, A. C. *The Political economy of war,* 1940. [332/.038a

JATHAR, G. B. & BERI S. G. *Indian Economics,* 1939. [331/190b/1-2

ANDREWS, C. F. *The Zanzibar crisis,* 1934. [338/129a

THOMAS, P. J. *The Growth of federal finance in India,* 1939. [331/.276 a

India—Finance Department. *Budget,* 1940-41. [D11-1

WATTAL, P. K. *The A.B.C. of Indian government finance,* 1940. [D1-1/38

Income tax ready reckoner under the stab system, 1939. [D1-2A/1/1939

India—Department of Commerce. *Report of the Indian tariff board,* 1937. [E1-1/3/23/1

Trade agreement between His Majesty's government in the United kingdom and the government of India, 1939. [E11-9/15

Indo-British trade negotiations. 3 vols. 1936-38. [E11-9/25

Report on the marketing of eggs in India and Burma, 1940. [F1/59/1

Reporting on the marketing of tobacco in India and Burma, 1939. [111/10/1

U. P.—Revenue department. *Report on the revenue administration,* 1938-39. [F111-1/U1

Law lexicon of British India, comp. and ed. by P. Ramanatha Aiyar, 1940. [360.1/A2

Annual survey of English Law by London School of economics and political science, 1940. [360.4/A.3

GODBOLE, D. B. *Dekkhan agriculturists' relief act* (act XVII of 1879) as amended up-to-date, 1938. [360.5A/D.3

NARASIMHAM, P. *Interpretation of Indian statues and of the government of India act, 1935.* 1940. [360.5A/G7

JOGLEKAR, R. N. *Alienation manual* containing information about all kinds of inams and watans, 1921. [360.5A/J.3

PHADNIS, H. S. *Watan act;* being a commentary on the Bombay hereditary offices act, act III of 1874; 5th ed. 1936. [360.5A/P3

PHADNIS, N. H. *The Law of Saranjams and inams,* 1936. [360.5A/P.4

U. P. encumbered estates act, 1934. [360.5A/U1/3/1

U. P.—Department of industries and labour. *Report together with the prescribed returns on the working of the workmen's compensation act, 1923* (VIII of 1923) 1940. [360.5A/U1/3/2

Venkoba Rao, K. *The Law relating to places of entertainment and amusement,* 1938. [360.5A/V6

Ratanlal Ranchhodda and D. K. Thakor. *Indian penal code;* 16th ed. 1939. [362.4/R3b

Criminal procedure code, act No. V of 1898; 3rd ed. 193'. [363.1/R3

Ramanatha Iyer, P. *The Madras Hindu religious endowments act* (act II of 1927); 2nd ed. [365.2I92

MAYNE, J. D. *Treatise on Hindu law and usage;* 10th ed. by S. Srinivasa Iyengar, 1938. [365.2/M2F

Raghavachariar, N. R. *Hindu law: Principles and precedents;* 2nd ed. 1939. [365.2/R2

Faiz Badruddin Tyabji. *Muhammadan law;* 3rd ed. 1940. [365.3/T1B

Ramaswamy Iyer, S. *Law of torts;* 2nd ed. preface by Sir Tej Bahadur Sapru, 1938. [367.2/I.2

Mysore—University of Mysore. *The Calendar,* 1939-40. [I11/3MIC2

India—Department of commerce. *Report on the work of the Indian government trade commissioner,* Hamburg, 1937-38, 38-39. [E11-9/24/1

Report on the work of the Indian government trade commissioner, Milan, 1937-38 E11-9/24/2

Report on the work of the Indian trade commissioner, London, 1937-38, 1938-39. [E11-9/24/3

India—Directorate of civil aviation. *Report on the progress of civil aviation in India,* 1938-39. [E11-8B/1

India—Railway board. *History of Indian railways constructed and in progress.* Up to 31-3-1939. [GIII/37

Dhirendranath SEN. *The Problem of minorities*, 1940. [343/222

Madras—Home department. *Madras administration*, 1937-40. [AII-I/m1

Daya Shankar Dubey & Shankar Lal Agrawal. *Elementary Statistics*, 1939. [311D27

Historical and economic studies; ed. by D. G. Karve, 1941. [333/138

PUCKLER, Count. *How Strong is Britain?* 1939. [354/088

RAUSCHING, Hermann. *The Revolution of nihilism*, 1939. [353/66

ANSTEY, Mrs. (Vera). *The Economic development of India*, 1939. [330/954A62

MURANJAN, S. K. *Modern banking in India*, 1940. [332/1M97

Ramachandra Rau, B. *Present day banking in India*, 1938. [332/1R16

BALAKRISHNA, R. *Industrial development of Mysore*, 1940. [331/293/294

DRUCKER, P. F. *The end of economic man*, 1939. 332/261[

Ilyas Ahmad. *Trends in socialistic thought*, 1937. [332/362

NEWCOMER, Mabel. *Central and local finance in Germany and England*, 1937. [335/212/2

Bimala Kanta Sarkar. *A Comparative study on national and local finance*, 1939. [335/272

BITTERMANN, H. J. *State and federal grants-in-aid*, 1938. [335/273

DASGUPTA, B. N. *A Treatise on Indian income-tax and accounts*, 1940. [R336/24D22

India—Commerce department. *Report of the Indian tariff board heavy chemical industries.* [R337/3139

Indian finance, Eastern group number; ed. by P. Srinivas, 1940. [R338/139

India—Indian Central Jute Committee. *Report on jute in India.* [R338/1/139

U. P.—Public works department. *Administration and progress report of the chief engineer United Provinces buildings and roads branch*, 1939-40. [AII-4U1

Bengal—Income tax department. *Annual returns*, 1939-40. [D1-2B1

U. P.—Revenue department. *Note on the stamp revenue*, 1940. [B1v-3U1

U. P.—Department of industries and commerce. *Administration report* 1940. [E1-2/U1

KANT, Immanuel. *Perpetual peace*; introduction by N. M. Butler, 1939. [170.033/3

INDRA. *The Status of women in ancient India*, 1940. [349/2/91

Calcutta—High Court of judicature. *Judgment on appeal on Bhowal Sanyasi Case.* [360/3HC

Ajit Prasad JAIN. *The United Provinces tenancy act* xvii of 1939, as amended by act I of 1940, 1940. [360/5AU1/3

Ranganadhaiyar, S. *Commentaries on the code of Criminal procedure*, 1939. [361/1R1b

DE QUIROS, C. B. *Curillo de criminologia derecho penal*, 1940. [366/8D/7

India—Department of commerce. *The Indian insurance year book*, 1939. [031/917/1939

India—Inter-University Board. *Handbook of Indian universities*, 1940. [91-3/91

Benares Hindu University. 1905 to 1935; ed. by V. A. Sundaram, 1936. [388/85a

India—Railway board. *Report on Indian railways, 1940.* 2V. [RGIII-I

Classified list of state railway establishment and distribution retirm of establishment of all railways. 1940. [GIII-118

Pratibhachandra BANERJEE. *Railroad transportation*, 1938. [385/1/P91

KOSAMBI, D. D. *On the study and metrology of silver punch-marked coins.*

MOHOLY, Lucia. *A Hundred years of photography, 1839-1939*, 1939. [770M79

REDFERN, Percy. *New history of the C. W. S.* 1938. [R 330C/R1

WAIGHT, Leonard. *Exchange equalisation account*, 1939. [R335/274

SALTER, Arthur. *Security, can we retrive it?* 1939. [R343/146/2

HALLET, G. H. and HOAG, C. G. *Proportional representation, the key to democracy*, 1940. [349/219

India—Foreign and political department. *Report on the interior administration, resources, and expenditure of the govt. of Mysore,* 1861. [352/245

DUFF, P. W. *Personality in Roman private law,* 1938. [366.1/D8

The All England law reports; and *index, 1936-1939.* [360.4/A4/1936/1 to 1939/1-4

JACKSON, R. M. *History of quasicontract in English law,* 1936. [367.1/J2

COULSON & FORBES. *Law of waters and of land drainage,* 1933. [368.3/CF.1

JACOBS, Bertram. *Law of exchange,* cheques, promissory notes and negotiable instruments generally, 1930. [368.5/J1

Sures C. GHOSH. *Principles and forms of pleading,* 1941. [369.3/G1

Krishnaswami Aiyar, K. V. *Professional conduct and advocacy,* 1940. [369.3/K1

SALMOND, John. *Law of torts,* 1936. [367.2/S1a

U. P.—Municipal administration and finances. *Report 1937-38 to 1938-1939.* [AIII-2/3U

U. P.—Finance department. *Financial handbook,* 1940. [DII-4/6/3

Finance accounts and the audit report. [DIII/U3/1940

India—Agricultural marketing advisor. *Annual report.* [FI/59/19

Bengal—Department of public health and local self-government. *Resolution reviewing the reports on the working of the district and local boards in Bengal.* [H1-2/B1/1938-9

Penguin political dictionary, comp. by Walter Theimer, 1940. [R300.11

THOMSON, J. W. & others. *European civilization,* 1939. [311.147

HARPER, F. H. *Elements of practical statistics,* 1939. [311.2H29

FAY, C. R. *Co-operation at home and abroad.* 2v. [330F1

BALAKRISHNA, R. *Industrial development of Mysore,* 1940. [331.295

RATHBONE, E. F. *The case for family allowances,* 1940. [332.363

SATTER, Arthur. *The Framework of an ordered society,* 1938. [332.364

ROBERTSON, D. H. *Essays in monetary theory,* 1940. [335.079/3

KIMBALL, D. S. *Industrial economics,* 1929. [338K49

FISCHER, Louis. *Stalin and Hitler,* 1940. [343.107/3

DALTON, Hugh. *Hitler's war before and after,* 1940. [343.223

WELLS, H. G. *The Commonsense of war and peace,* 1940. [343.53/3

BERBIERS, J. D. *Elementary principles of commercial law,* 1935. [347.7B48

MUIR, Ramsay. *Civilization and liberty,* 1940. [349.037/2

WELLS, H. G. *The New world order,* 1940. [349.556/6

The Rights of man or what are we fighting, 1940. [349.056/7

ANGELL, Norman. *Why freedom matters,* 1940. [349.220

Penguin Hansard, 1940. [354.89/1

WINTRINGHAM, Tom. *New ways of war,* 1940. [360.117

The All England law reports, 1940/1,3. [360A4/1940/1,3

India—Reforms office. *The Unrepealed central acts with chronological table and index.* [360.5AG10/1-9

Anglo-Saxon characters; ed. by A. J. Robertson, 1939. [361.5A2

JACKSON, S. *A Manual of international law,* 1938. [362.1J1

Golap C. SARKAR. *Hindu law,* 1935. [365.2S3d

Lalla R. TEWARI. *Leading cases on Hindu law,* 1940. [365.2T2

Mohomed Ullah ibn S. Jung. *Dissertation on the development of Muslim law in British India,* 1932. [365.3A.6

DUFF, P. W. *Personality in Roman private law,* 1938. [366.1D8a

STREET, H. A. *A Treatise on the doctrine of ultra vires,* 1930. [367.48.1

BARWELL, N. *The Law of insurance in British India,* 1940. [367.7B1/1940

Gow, William. *Marine insurance, 1931.* [368.2G72

KUHN, A. K. *Comparative commentaries on private international law or conflict of laws,* 1937. [368.7K1

Badri Rao, S. R. N. *Road rail transport with special reference to condition prevalent in Travancore,* 1941. [385B18

SUNDARAM, V. A. *Alma mater,* 1940. [R 388A 85/2,3

Mysore—General department. *Report on the administration of Mysore,* 1939-40. [A-V-2M1

Andhra University, Waltair. *The University code,* 1940-42. [AII-3A1C

India—Council of State. *Debates,* 1939. 2v. 1940. 1v. [BII-3/4/5-7

Bihar—Department of industries. *Annual report,* 1938-39. [E1-2B1

India—Economic advisor. *Studies in Indian economics,* 1924-39. [E1-158/1-2

Bengal—Revenue department. *Report of the land revenue commission,* 1940. [F1-13A/1

Gulshan Rai. *Agricultural statistics of the* (British) *Punjab,* 1938-39. [F1-18/52

Roshan Lal Anand & Brayne, F. L. *Soldier's savings and how they use them,* 1940. [F1.18/68

Faiz Ilahi. *An Economic survey of Launa, a village of the Punjab.* 1940. [F1/18/69

Ram Lal. *Urban working class cost of living index number (1939) in the Punjab,* 1940. [F1.18/70

Bengal—Department of agriculture. *Annual report, 1939-40.* 2v. [F11-2B1

U. P.—Public works department. *Irrigation administration report,* 1940. [FIV-2W

Mysore—University of Mysore. *The Calendar, 1939-40.* V. 2. [3M1c2

Burma—Superintendent of cottage industries. *Report, 1940.* [E1-123

Cochin—Education department. *Administration report, 1940.* [I1-4C1/1939-1940

FAY, Bernard. *The Revolutionary spirit in France and America.* [349/221

India—Imperial dairy department. *Annual report, 1940.* [FVI-44/1940

India—Imperial record department. *Annual report, 1940.* [024/05/1940

India—Income-tax department. *Annual returns of the income-tax department, United Provinces, 1940.* [D1-2/U1/1939-1940

Indian chambers of commerce and industry, 1941. *Proceedings, 1941.* [E1-8C/4/3

Indian forest ranger college, Dehra Dun. *Progress report,* 1939-40. [I1-1/65/2

JAIN, L. C. *The Working of the protective tariff in India,* 1941. [331/192/3

LASKI, H. J. *Communism, 1932.* [332/195Aa

Lucknow—Provincial museum. *Annual report. 1940.* [I-IV/L

Orissa—Education department. *Report on the progress of education in Orissa. 1940.* [I1-1/63

SARGENT, John. *The Economics of education with special reference to Indian problems.* 1941. [388A/S8

U. P.—Co-operative department. *Annual report on the working of co-operative societies, 1939-40.* [FV-2/W1939-1940

U. P.—Finance department. *Appropriation accounts and the audit report,* 1940. [DIII/U2/1939-1940

U. P.—Medical department. *Annual report on the mental hospitals,* 1940. [HII/U1940

U. P.—Public health engineering department. *Annual report of the superintending engineer.* [H1-2/U1A/1940

U. P.—Revenue department. *Final report of settlement and record operations in tahsil Dehra, district Dehra Dun, 1941.* [FIII-4C/U1/8/1940

U. P.—Rural development (Excise) department. *Report on the excise administration, 1940.* [DIV-2b/U1

PHILOLOGY

LYDALL, G. O. E. *A Practical guide to precis writing and indexing,* 1939. [424.56-57

Batakrishna GHOSH. *Linguistic introduction to Sanskrit,* 1937. [850D/164

Tamil lexicon, Supplement pt. 3. 1939. [035.8A/T1/2/3

JAGGER, J. H. *English in the future.* Nelson, 1940. [421/.30

WOOLNER, A. C. *Introduction to Prakrit,* 1939. [470/05/2

SAITO, Tokuzo. *A Primer of modern Japanese language.* n.d. [490.28

PRAHARAJ, G. C. (*Comp.*) *Purnachandra Odia bhasha-kosha.* V.7.[035.9/P1/7a,7b

SCIENCE

TRATTNER, E. R. *Architects of ideals*, 1938. [501T77

FOX, C. S. *Physical geography for Indian students*, 1938. [551.4F79

TOLMAN, C. F. *Ground water*, 1937. [551.49T58

Mysore—University of Mysore. *Recent advances in our knowledge of the upper cretaceous and lower eocene beds of India* by L. Rama Rao, 1940. [551.77M99

HAGER, Dorsey. *Practical oil geology*, 1938. [553.28H12

COMBER, A. W. *Magnesite as a refractory*, 1937. [553.68C72

List of coal mines in British India, 1939. [553.2L77

Indian zoological memoirs on Indian animal types; ed. by K. N. Bahl. [590.5I39.1&.4

India—Department of communications. *Report on the progress of broadcasting in India*, 1939. [621.384164I39

Smithsonian institution. Washington. *Annual report.* [506/S66

BALL, W. W. R. *Mathematical recreations and essays*; 1905. [510/7B18

Brijmohan. *Intermediate calculus*, 1937. [517B85

BAKER, R. H. *Astronomy*; 1940. [520/2B16

National research council, Washington. *Internal Constitution of the Earth*, 1939. [R 526/1N27

BHAGAVANTAM, S. *Scattering of light and the Raman effect*, 1940. [535B57

Light and colour in the open air; ed. by K. E. B. Jay, 1940. [535M66

WHITEHEAD, J. B. *Electricity and magnetism*: 1939. [537W59

HERZBERG, Gerhard. *Molecular spectra and molecular structure*, 1939. [539/1H58

SITARAMAN, M. L. *Practical chemistry for intermediate students*, 1938. [542S62

HUEBNER, Walther. *Geology and allied sciences*, 1939. [R 550/3H88

MATHER, K. F. & MASON, S. L. *A source book in geology*, 1939. [R 550/8M42

SCOTT, W. B. *Some memories of a palaeontologist*, 1939. [550/9S43

WORCESTOR, P. G. *A Text book of geomorphology*, 1939. [551/3W92

PFIZENMAYER, E. W. *Siberian man and mammoth*; 1939. [569P52

BERKELEY, M. J. *Gleanings of British algae*, 1833. [389/3B51

BORNET, Ed. & THURET, G. *Notes algologiques*, 1880. [R589/3B73

KLEIN, Felix. *Elementary mathematics for an advanced standpoint*, 1939. [510.2/K65

MCLACHLAN, N. W. *Complex variables and operational calculus with technical applications*, 1939. [517.8/M16

EVANS, R. C. *Introduction to crystal chemistry*, 1939. [548/E92-1

Ramani Ranjan CHOWDHURY. *Handbook of mica*, 1939. [553.9/R16-1

India—Geological survey of India. *Memoirs.* [R 555.4/I39/71:1;2/73/75 *Records.* [R 555.4/I39-1/70

WALTON, John. *Introduction to the study of fossil plants*, 1940. [561W23

MOIR, J. R. *Earliest men.* [573.2M71

DOUGLAS, G. H. *Modern commercial arithmetic.* 1926. [511.8D73

GREEN, H. H. and FRANKLIN, Thomas. *Commercial arithmetic and accounts*, 1933. [511.8G79

Kali Pada BASU. *Algebra made easy*, 1898. [512K14,2

EDDINGTON, Arthur. *The Expanding Universe*, 1933. [523.1E21

CLARK, David. *Plane and geodetic surveying for engineers.* [526.9C59

HADLEY, H. E. *Practical physics*, 1916. [530.7H13

ROJANSKY, V. *Introductory quantum mechanics*, 1939. [531R71R74

RANE, M. B. & KULKARNI, D. A. *Practical chemistry for intermediate students*, 1933. [542R19

LONGWELL, C. R. & others. *A Textbook of geology*, 1932. [550.2L85

National Research Council, Washington. *Recent marine sediments*, 1939. [552.5N27

DARRAH, W. C. *Textbook of plaeobotany*, 1939. [561D22

HAYWARD. *Botanist's pocketbook*, 1939. [R580.2H42

Chockalingam Pillai, V. *The origin of the Indo-European races and peoples, 1935.* [312/113/1a

DAVIDGE, H. T. & HUTCHINSON, R. W. *Technical electricity.* [621.3D24.1

FOWLER, H. W. *Contribution to the biology of the Philippine Archipelago and adjacent regions,* 1941. [597.092991F78

Muhammad Bin Umail. *Three Arabic treatises on alchemy,* 1933. [540.1M95

National research council, Washington. *Report of the committee on sedimentation,* 1940. [551.35N27

STRONG, John. *Modern physical laboratory practice,* 1940. [530.7S92

Nagendra N. SEN GUPTA. *Ayurvedic system of medicine,* 1925-26. [610.954/N14.1-3

Udya Chand DUTT. *Materia Medica of the Hindus,* 1922. [615.1/U18

WHILLA, William. *Pharmacy, materia medica and therapeutica,* 1939. [615.1/W61

Dhirendra Nath RAY. *The Principle of tridosa in Ayurveda,* 1937. [616.07/D53

TERMAN, F. E. and MACDONALD, F. W. *Fundamentals of radio,* 1938. [621.3841/T31

India—Central irrigation and Hydrodynamic Research pub. Research station, Poona. [R 627/I39/1

Review of the sugar industry in India. [R 664.1/R45.1939

Sugar technologists' association of India, Cawnpore. *India Sugar manual.* [R 664.1/S94.1940

Indian research fund association, New Delhi. *Report of the Scientific advisory board,* 1939. [R 610.6I31

LANGDON-BROWN, Walter & HILTON, Reginald. *Physiological principles in treatment,* 1936. [612.014L27

WALKER, Kenneth. *The Physiology of sex and its social implications,* 1940. [612.6W18

DE SIGMOND, A. A. J. *The Principles of soil science,* 1938. [631.4D45

HILYER, Mrs. C. (Isabel). *Hydrophonics; food without soil.* 1940. [631.4H65

WAKSMAN, S. A. *Humus, origin, chemical composition and importance in nature,* 1938. [R 631.46W14

HEALS, Frederick. *Modern commercial practice with correspondence,* 1931. 2v. [651.7H45

BUCKLEY, E. A. *How to write better business letters,* 1936. [651.75B92

ADGIE, William. *Modern book-keeping and accounts,* 1936. [657A23

DALEY, L. B. *The Junior book-keeper,* 1932. [657D15

USEFUL ARTS

BANKS, Charles. *Physiology, public health and psychology,* 1931. [614B21

Gt. Britain—Department of scientific and industrial research. *The investigation of atmospheric pollution.* v. 24 and supplement. [614.17G78

U. P.—Department of public health engineering. *Annual report, 1939.* [H1-1/41a/44

PALMER, L. S. *Wireless principles and practice,* 1936. [621.3841P17

Von BERNEWITZ, M. W. *Handbook for prospectors,* 1935. [622.12V94

SLOLEY, R. W. *Instruments of aircraft, category X licence,* 1940. [629.13078S63

RELF, E. F. *Aerodynamic,* 1937. [629.1323R33

BARLOW, R. F. *Aero-engines;* inspection before flight: C licence, 1938. [629.1345B25

Indian lac research institute. *Annual report, 1939.* [638.32I39

Indian central jute committee. *Annual report, 1939-40.* [EIII-9/1

Indian forest college, Dehra Dun. *Annual report, 1938-39.* [I1-1/65/1
Progress report. 1938-39. [„ 65/2

India—Imperial dairy expert, Delhi. *Report. 1939.* [FVI-4/4

Mercantile terms and abbreviations. n.d. [R 650.3M55

CAMPBELL, William. *Modern business and its methods,* 1937. [651.3C19

Office practice: an introduction to the work and methods of the clerical side of business. 1940. [„—1

HEAD, F. D. *Meetings:* the regulation of and procedure at meetings of companies and public bodies and at public meetings, 1930 [651.428 H43

LYDALL, G. O. E. *A Practical guide to precis writing and indexing*, 1939. [657.74L94

WESTON, W. J. *Business letters in English*, 1937. [651.75W53

Diagram of typewriter keyboard. n.d. [652D53

PITMAN, Isaac. *Graduated reading exercises in Pitman's Shorthand.* n.d. [653.725P68-11

BAYLISS, W. J. *An Introduction to book-keeping*, 1936. [657B35

KANER, H. *A New theory of goodwill*, 1937. [657K16

SPICER, E. E. and PEGLAR, E. C. *Practical auditing*, 1940. [657S75-1

POWELL, J. W. *Planned selling*, 1937. [658P88

RIDGWAY, A. C. *Cost accounts in principle and practice*, 1931. [658.002R54

FAVELL, A. J. *Commerce for commercial & secondary schools*, 1939. [658.01F27

MAIRET, G. *Principles and practice of business*, 1930. [658.01M22

MYERS, C. S. *Business rationalisation*, 1932. [658.01M99

GOODE, Kenneth. *Manual of modern advertising.* n.d. [659.1G64

WITTS, A. T. 'The Superheterodyne receiver'; 4th ed. 1939. [621.3841366232W83

Bihar—Department of Agriculture. *Season and crop report of Bihar*, 1938-1940. [F11-1B4

Forest research Institute, Dehra Dun *Forest research in India*.1937-38. [FVI-3 8 2

U. P. Forest Department. *Annual progress report* of forest administration in the United provinces. 1938-39; 1939-40. [FVI-3 41

COMMERCE

MITRA, J. C. *Theory and practice of commerce and business organisation*: 3rd ed, 1938. [651M68 :1

PITMAN, Isaac. *Shorthand commercial letter-writer.* n. d. [651.75P68-1

AIYAR, K. S. *Pitman's reporter's phrase book*; 3rd ed.n.d. [653.725 A431-1:1-3

GEORGE, D. J. *Dictation tests on the grammalogues and contractions of Pitman's shorthand.* n.d.[653.725G34-1

HOLLAND, R. W. *Principles of reaching applied to Pitman's shorthand.* n.d. [653.725H73

HYNES, James. *Talks with shorthand students*; 2nd ed. n.d. [653.725H99

PITMAN, Isaac. *Five minutes speed tests.* n.d. [653.725P68 7.2

Phonographic phrase book. n.d. [653.725P68-9

Elementary examination speed tests. n.d. 653.725P68-12

Shorthand: public examinations speed tests. n.d. [653.725P68-13

KANER, H. *Balance sheets explained analysed, and classified*, 1938. [657K16-1

JONES, H. L. *Ground work of commerce*, 1937. [658.01J77.1

India—Industrial research bureau. [EI-I45

(1) *Bibliography of industrial publications in India from 1936.*

(2) *A survey of the Indian glass industry.* 1936.

(3) *The manufacture of photographic plates in India.* 1937.

(7) *The utilisation of nepheline Syenite* rock as a partial substitute for soda ash in the glass industry of India.

Dinesh Dadabhai DORDI. *Glossary of the parts and organs of the human body* [610/3

SIDDIQI, M.A. *Anatomical atlas of the human body.* 1938. [R 611S56

Department of public health. *Annual report. 1939.* [R 714 09542U58
Annual report. 1929. [R 614 09542U58

Birendra Nath GHOSH. *Pharmacology materia media and therapeutics*; 1939. [R 615 1B61

GHOSH, J. C. *Indigenous drugs of India*; 1940. [615 1G42

Bhaskar Govind GHANEKAR... *Ayurvedic nosology.* 1938 [616 01B57

Aushutosh Roy. *Pulse of Ayurveda.* 1929. [616 071A82

Prabhakar Chatterjee. *Indian science of pulse.* 1934. [616 071P89

London—University of London.*B.Com. examination papers.* 1937. [R 650 7L84

Thoop, F. H. *Outlines of industrial chemistry.* 1923. [660 2T51

Hilditch, T. P. *The chemical constitution of natural fats,* 1940. [R 665H64

Bragg, W. L. *Structure of silicates,* 1930. [666B81

India—Indian Stores Department. *Standard specifications for pigments.. painters' materials,* 1940. [R 667139

Jordon, H. W. *How to form a company,* 1938. [658.1J82

Lincoln, E. E. *Applied business finance,* 1929. [658.14L73

Hilditch. T. P. *The Chemical constitution of natural facts,* 1940. [R 665H64

Soap blue book, [R 658.1S67

Browne, E. G. *Air and precautions manual Unated Provinces,* 1940. [614.8B88

The Chemist and druggst diary and year book, 1941. [615.1C51

Journal of the iron and steel institute. v. 142. [669.1J78

Thomas, Howard. *How to write for broadcasting,* 1940. [621.384T45

FINE ARTS

Yone Noguchi. *Hiroshige,* 1940. [R 730/43&a

Anagarika B. Govinda. *Some aspects of stupa symbolism,* 1940. [760.049

Whitehead, R. B. *Catalogue of coins in the Panjab museum,* Lahore, 1914. [9991C.018/1a

Vijayadevji, Maharana of Dharampur. *Sangit Bhava,* 1939. [775.27a

Sharp, Thomas. *Town planning,* 1940. [700/.67

LITERATURE

Lamb, Charles & Mary. *Works;* ed. by E. V. Lucus, 1912. v. 1 & 4. [818A.195/184

Myers, F. W. H. *Wordsworth,* 1935.

McKerrow, Ronald B. *Prolegomena for the Oxford Shakespeare,* 1939. [811.26/2

Lascelles, Mary. *Jane Austen and her art,* 1939. [814B.010/6

Lucus, F. L. *Ten Victorian poets,* 1940. [814B.449/4

Dataller, Roger. *The Plain man and the novel,* 1940. [814B.655

Evans, B. I. *Tradition and romanticism:* studies in English poetry from Chaucer to W. B. Yeats, 1940. [814B.656

Wilson, R. M. *Early middle English literature,* 1939. [814B.657

The English Association London. "*Presidential address..*" [*Library has:* 1939. Temple, William: *The Genius of English poetry.*] [814B.110A/9

Religious lyrics of the XVth century; ed. by Carleton, Brown. [815B.1166

Twenty best plays of the modern American theatre; ed. by John Gassner, 1940. [816B.51

The Pulitzer prize plays; ed. by Kathryan Coe and William, H. Cordell; introd. by William Lyon Phelps, 1940. [816B.50

Sri Krishnaraja Wadiyar Bahadur Maharaja of Mysore. *Speeches,* 1940. [818D/.96/3/2

The New dictionary of thoughts, a cyclopaedia of quotations; compiled by Tryon Edwards ed. by C. N. Catrevas and Jonathan Edwards, 1936. [811/39

Elton, Oliver. *Essays and addresses,* 1939. [814/106/3a

Cruse, Amy. *The Elizabethan lyrists and their poetry,* 1930. [814B/199/8a

Ingram, J. H. *Marlowe and his poetry,* 1926. [814B/199/16a

Edmunds, E. W. *Shelley and his poetry,* 1930. [814B/199/24a

Hudson, W. H. *Wordsworth and his poetry,* 1934. [814B/199/30a

GARROD, H. W. *Wordsworth : lectures and essays ;* 2nd ed. 1927. [814B/294/8a

ROOT, R. K. *The Poetical career of Alexander Pope,* 1938. [814B/485/2

MACCARTHY, Desmond. *Drama.* Putnam, 1940. [814B/647/2

BALDWIN, C. S. *Renaissance literary theory and practice, classicism in the rhetoric and poetic of Italy, France and England, 1400-1600.* 1939. [814B 658

MOULTON, R. G. *Shakespeare as a dramatic artist ;* 3rd ed. 1929. [817A 060 2a

SYMONDS, J. A. *Shelley.* 1937. [906 05 31b

OLIPHANT, M. O. (W) *Sherdan,* 1909. [906/05/32b

STEPHEN, Leslie. *George Eliot,* 1926. [906/06/10c

Woolner commemoration volume, 1940. [841/M1/8

MADHAVANANDA. *The Last message of Sri Krishna,* 1939. [850A/3c/15

Visvanatha Nyayapancanana. *Bhasa-pariccheda* with siddhantamuktavali; tr. by Swami Madhavananda, 1940. [850/4c/15

Akshaya Kumari Devi. *History of Sanskrit literature.* n.d. [850D/152

TANNENBAUM, S. A. *John Lyly, a concise bibliography,* 1940. [016.82/E1/12a

George Peele, a concise bibliography, 1940. [,, 15

King Lear, a concise bibliography, 1940. [,, 16

Dwarka Prasad SRIVASTAVA. *Pushpa Vatika,* 1941. [860B/04p

DICKENS, Charles. *A Tale of two cities,* 1931. [812.14

DUFF, J. W. Roman satire: its outlook on social life, 1936. [R 813.152

WILSON, Richard. *Helps to the study of Arnold's 'Wordsworth'* 1924. [R 814B.294/9

GRIERSON, H. J. C. *Milton and Wordsworth,* 1937. [R 814B.453/8

The Prelude to poetry, 1927. [R 814B.659

BOND, R. W. *Studia Otiosa,* 1938. [R 814B.660

HAMILTAN, C. R. *Poetry and contemplation,* 1937. [R 814B.661

HUMPHREYS, A. R. William Shenstone, 1937. [R 814B.662

TENNYSON, Alfred. *Lancelot and Elaine.* n.d. [820A.193/2

SEN, J. N. *Notes to select English prose.* [820B.229

The Lear omnibus, 1938. [815A/538

TANNENBAUM, S. A. "Shakespeare's *Merchant of Venice.*" 1941. [016.82/E1/17

John Webster, 1941. [,, /19

SANSKRIT LITERATURE

BHASKARACHARYA. *Ganitadhyaya :* (Uttarardha), 1941. [847.2/71a

BAGBHATTA. *Rasa-ratna-samuchchaya-tika,* 1941. [615.2

HINDI LITERATURE

Govind Vallabha PANT. *Antahpur ka chhidra,* 1997 (Vik). [858C/126/4

Jyotilal BHARGAV. *Manushya ka vikash or Adami kis tarah apani aj kal ki shakl men aya,* 1940. [855.1/.159

Baldev Das BIRLA, Raja. *Dārshanik vichār* (2 cop). [854.2/155/3,3a

Vedant wa ātmavichar, 1992 (Vik). [854.2/155/2

BIHARI, Mahakavi. *Bihari-sudha,* 1941. [858B/.77/8

Buddhi Sagar VARMA. *Stri saundarya aur swasthya,* 1998 (Vik). [857B2/91/2

Braj Bhushan Ji Maharaj. *Kankaroli ka itihasa,* 1994 (Vik). [859B/138

Murlidharlal SHRIVASTAVA. *Poshan-sansthan aur khadya ka samikaran,* 1941. [857B2/124

Radha Krishna DAS. *Nissahaya Hindu,* 1997 (Vik). [858D.2/55/2a

Satya Prakash & Sant Prasad TANDAN. *Bhojan aur swasthya,* 1998 (Vik). [857B2/125

Abu Jafar ibn Jarir Tabri. *Tarikh Tabri,* 1940. [888A.01/8/3-46

BALL, Robert. *Ilme hayate-kurwi,* 1940. [888A.01/202/1

BARLOW, G. T. *Chunai*, 1940. [888A.01/193/2

BURKELEY, Comyns. *Ibnul-waladat*, 1939. [888A.01/214

1939. [888A.01/190/2

Haider Ali Khan. *Mubadi janiniyat*, 1939. [888A.01/214

JAMES, William. Usule nafsiyat, 1940. [888A.01/188/3

JATHAR, J. B. & BERI, S. G. *Muashiyat Hind*, 1940. [888A.01/213

Md. Ali Raja Husain Sadiqi. *Na mumkin*. [888F4/171

STEPHEN, J. F. J. *Dastan-e-Nand Kumar wa muakhzah-e-surul-ijaempi*. [888A.01/211

Sydney, Owen. *Hindustan ki halat; Britani tasallut ke qareeb*, 1940. [,,/212

ARABIC LITERATURE

Abdul Rahman Khazni, *Mizanul-Hikmat*. [886/92

Abi Abitadul Maamar bin Almasni Ultimi-timgresh. *Kitab-ul-khail* [886/941358(H).

Abi-ul-Barkat Habt-ulla ibn Ali bin Malka-ul-Baghadadi. *Kitab-ul-maatabar*, 1357-58 (H).[886/95/1-3

Nasir-ul-ddin Muhammad ibn Muhammad bin-ul-Hasan-ul-Tusi. *Mazmua-ul-rasail*. [886/93

(Soikh-ul-Imam Abi-ul-Farj Abdul) Rahman bin Ali ibn Muhammad bin Ali ibn ul-Jwazi-ul-Matufi. *Almanazim*, 1357-58 (H). [886/.96/5-9

HISTORY

STEINBERG, S. H. *Historical tables*, 1939. [R 905.52

PARKES, H. B. *A History of Mexico*, 1938. [R 930.32

Rama Shanker TRIPATHI. *History of Kanauj to the Moslem conquest*, 1937. [R 942.183b

SANAULLAH, Mawlawi Fadil. *The Decline of the Saljuqid empire*. with an intro. by E. D. Ross, 1938. [R 950A.26

HANNAH, H. B. *Ancient Romic chronology*, 1919. [R 989.27

India—Archaeological survey of India. *South Indian inscriptions*, 1940. [R 991B.49/1

Nagendra N. GHOSH. *Early history of India*, 1939. [942.168Ba

PAN KU. *The History of the former Han dynasty*; tr. by H. H. Dubs, 1938. [953.057

PHILIP, George. *Indian empire climate*, Nov. 1st to April 30th, winter conditions; scale 64 miles to 1 inch.; ed. by J. F. Unstead and E. G. R. Taylor. n.d. [985C.015/1

Indian empire climate, May 1st to Oct. 31st, summer conditions. [985C.015/2

MARSHALL, John. *A Guide to Taxila*; 3rd ed. 1936. [991D.04b

Hemchandra RAYCHAUDHURI. *Political history of ancient India*, 1938. [942/073Aa,b

Hem Chandra ROY. *The Dynastic history of Northern India*, 1931. [943C/020/1b-2b

BHANDARKAR, D. R. *Lectures on ancient Indian numismatics*, 1921. [991/014a

LOGAN, A. C. *Old chipped stones of India*, 1906. [991/o36

The Indian annual register: an annual digest of public affairs of India, 1939, (V. 1, 2.) 1940 (V. 1, 2). [031/2/40/1

Life of Sri Ramakrishna, 1936. [907/350ca

TEGGART, F. J. *Rome and China*, 1939. [912/056

MAKEEV, Nicholas & O'HARA, Valentine. *Russia*. Benn, 1925. [925/016a

MAZOUR, A. G. *Modern Russian Historiography*, 1939. [925/066

BHANDARKAR, D. R. *Asoka*, 1932. [942/099b

Nilkantha Sastri, K. A. *The Colas, 1935-37*. (2v in 3). [942/141

Ashirbadi Lal Srivastava. *Shuja-ud-daulah*, 1939. [943A/097/1a

Kalikinkar DATTA. *Alivardi and his times*, 1939. [943A/098

Nandalal CHATTERJI. *Verelst's rule in India*, 1939. [944/186A

CHIROL, Valentine. *India*, 1926. [949/09Aa

PHILBY, H. St. J. B. *Arabia*, 1930. [950/033

LAMB, Harold. *The March of the Barbarians*, 1940. [950A/027

PETECH, Luciano. *A Study on the Chronicles of Ladakh: Indian Tibet* 1939. [953/058

KUNDANGAR, K. G. *Inscriptions in Northern Karnataka and the Kolhapur State*, 1939. [991B/050

Binaya Krishna DEB. *Early history and growth of Calcutta*, 1905. [948/133

DREWITT, F. D. *Bombay in the days of George IV*, 1907. [909A/101

WEBSTER, D. E. *The Turkey of Ataturk, social progress in the Turkish reformation.* [927/029

Pramode Lal PAUL. *The Early history of Bengal*, 1939. [948/134

GHOSE, N. N. *Memoirs of Maharaja Nubkissen Bahadur*, 1901. [909A/102

India—Archaeological survey of India. *Annual report, 1936-37*. [056-2/A7

Hyderabad—Archaeological department. *Annual report*, 1940. [056-2.H1/20

The Second great war, a standard history. n.d. [R 90551/1,2

L'enseignement de Ramakrishna, 1941. [907/.350D

LORIMER, E. O. *What Hitler wants*, 1939. [907/.599

MILLER, Webb. *I found no peace*, 1940. [907/600

BRITTAIN, W. J. *Leaders of Britain; this man Beaverbrook.* n.d. [907/601

ARTHUR, James. *A Royal romance*, 1941. [907/602

TREVOR-REPER, H. R. *Archbishop Laud*, 1940. [907/603

CITRINE, Walter. *My Finnish diary*, 1940. [909B/.34

Thacker's Indian directory (including Burma), 1940-41. [R 915.4T36

THURSTON, Edgar. *The Madras presidency with Mysore, Coorg and the associated states*, 1914. [915.44T54

DOUIE, James. *The Punjab, North-West Frontier Province and Kashmir*, 1916. [915.481D73

LLOYD, Roger. *The Golden middle age*, 1939. [921A/.153

FEDERN, Karl. *The Materialistic conception of history*, 1939. [921G/.029

PARRY, J. H. *The Spanish theory of empire in the sixteenth century*, 1940. [926/.020

Paramatma Saran. *The Provincial govt. of the Muglals*, 1526-1658, 1941. [943A/.099

Baroda—Archoeological department. *The Ruins of Dabhai or Darbhavati in Baroda State*, 1940. [056-2/.62/3

BARGER, Evert and WRIGHT, Philip. *Excavations in Swat and explorations in the Oxus territories of Afghanistan. a detailed report of the 1938 exploration*, 1941. [056-2/M1/64

GAEBELE, Y. R. *Creole et grande dema*: Johanna Begum, Marquise Dupleix (1706-1756), 1934. [922/.67

Indian historical records commission. *Proceedings of meetings*; 17th meeting, Baroda, Dec. 1939. [940/.28/17

Madras—Epigraphical survey. *List of inscriptions.* [991B/ 049A

Subject index to the annual reports on South Indian epigraphy from 1887 to 1936. 1940. [056-2/.S4

Madras—Records office. *Diary and consultation book*; v. 79 v. 80, 1752, 1939. [940/.43/8

Letters from Fort St. George; v. 29, 33, 35-36. 1761, 1940. [940/.41/3

Manilha consultations, 1763; v. 5 v.6. 1940. [940/.42/6

Malleson, G. B. *Les Dernieres luttes des Francais dans l'Inde et sur l'ocean Indie'n.* 1932. [922/.068.

Raja Rammohun Roy and progressive movements in India, 1941. [949/188,188a

VON LOON, H. W. *The Story of the Pacific*, 1940. [930/030

Volumb 6 Numbers 2-3

JOURNAL

OF THE

BENARES HINDU UNIVERSITY

Editor

U. C. NAG, M. A., Ph. D. (Lond).

Associate Editors

PHULDEO SAHAY VARMA. M. Sc., A. I. I. Sc.,

JIVAN SHANKER YAJNIK, M. A.

Assistant to the Editor

SATĪŚA C. GUHA

1942

CONTENTS



Sitting left from to right :—(1) Pt. Amba Das Shastri : (2) MM. Pt. Ramavatara Sarma ; 3) MM. Dr. Ganganath Jha ; (4) MM. Pt. Yadavesvar Tarkaratna ; (5) MM. Pt. Adityaram Bhattacharya ; (Pro. Vice-Chancellor) ; (6) Dr. Sir Sundar Lal (Vice-Chancellor) ; (7) R. P. Dewhurst, *I. C. S.* (8) Dr G. N. Chakravarti ; (9) Dr. Radhakumud Mookerjee ; (10) MM. Pt. Haraprasad Sastri, *C.I.E.* (11) Pt. Hotibhai Shastri.

Standing left to right :—(1) Prof. N. C. Nag; (2) Prof. P. B. Adhikari ; (3) Prof. S. C. De ; (4) Satyavrata Bhattacharya ; (5) Prof. P. Seshadri; (6) Prof. M. B. Rane ; (7) Prof. P. K. Dutt ; (8) Dr. Lakshmi Narayan ; (9) Pt. Manoharlal Zutshi; (10) Dr. Bhagavan Das, (11) Prof. Bertram Keightley.

PSYCHOLOGY OF BEAUTY

B. L. ATREYA, M.A., D.LITT.

Aesthetic appreciation, on which our aesthetic judgments are based is a universal human experience. Every human being, perhaps animals also, whatever his intelligence quotient or social status, appreciates beauty and consequently judges things as beautiful, indifferent or ugly. According to Hindu mythology, even Shiva, the greatest of all yogins, was carried away by the enchanting beauty of the form of Mohini assumed by Vishnu to win over the hearts of the Asuras. The great ancient sages, like Narada, Parashara and Vishwamitra, could not prove insensible to the charm of beauty. It is no wonder, therefore, that philosophers have, since time immemorial, been trying to understand in what beauty consists. A perusal of any survey of the opinions of the philosophers of all ages, such as found in E. F. Carritt's *The Philosophies of Beauty*, Bosanquet's *History of Aesthetics* and Croce's *Aesthetics*, leaves the reader, however, with an impression that the nature of beauty is as difficult to understand as that of truth and goodness, although judgments about them are so common. It is not our intention here to review the philosophers' definitions of beauty or to propose a new definition of it. We have set an humbler task before us, namely, of making a general, and as far as possible, an exhaustive survey of all the psychological factors that influence our judgment as to whether a particular object is beautiful or not.

In our opinion beauty is not a quality inherent in objects and apprehended in common by all men alike and retained by the objects even when no subject perceives them, nor is it a purely subjective state felt within the mind without the consciousness of any object whatsoever. The world of objects apart from mind, if there be any such world in existence, and the pure subject confined to its own self-consciousness, if such an existence and experience are possible, both alike must be free from aesthetic qualifications. Beauty is a unique quality, *sui generis* in nature, which inheres neither in a pure object nor in a pure subject, but in a particular relation between a subject and an object. It pertains to the total complex situation in which the subject and the object are placed in relation to each other. The situation is a unique whole, a gestalt, and the aesthetic experience, therefore, cannot be rightly attributed

to any of its parts. Beauty is therefore an emergent quality of the total complex situation, which cannot be analysed without an unexplained remainder. It emerges when a particular subject—with his total psychophysical personality behind him—apprehends in an object some aspects or attributes which, without the least effort on his part, attract and arrest his attention, and in the contemplation of which he for the time being forgets himself and his practical needs. The experience of beauty is thus characterised by spontaneous attention, minimum tension, maximum satisfaction and intense agreeableness centred round an object. It is a state of complete repose and is very much akin to ecstasy or *savikalpaka samadhi* of Indian yoga. The psychology of beauty therefore reduces itself to understanding how such a state of experience is produced, i.e., what objective, subjective and relational factors bring about or influence it.

The delusion that beauty is an absolute and objective quality of things arises from the fact that, in spite of individual differences in their psychophysical constitution, men have much in common; and the idea that beauty is purely subjective, variable and relative, is due to the fact that in spite of all men having a common and similar nature, they differ very much from each other in their psychophysical constitution. Just as there is similarity as well as difference in the nature of men, so there will be agreement and difference in matters of taste. Beauty will, accordingly, be general as well as specific. Agreement with regard to the general nature of the beautiful and disagreement with regard to its specific nature will be the general rule of aesthetic appreciation. Recent experimental work of Eysenck (vide *British Journal of Psychology,* July, 1940) supports this view. His experiments on unfamiliar paintings have led him to believe that in visual aesthetic appreciation there is a general objective factor which is independent of individual learning, tradition and associations. In addition to and apart from the general and objective factor there is a specific factor which indicates whether the appreciator is an extravert or introvert, radical or conservative, of formal or representative type, young or old.

Our aesthetic judgments are affected by countless factors, in fact. We shall, however, point out and describe here only the most outstanding ones.

1. *The Sensory Material*:—All aesthetic appreciation is centred round an object, as we have already said. The object

may be a perceived or imagined one, but generally the former. Every act of perception involves a number of mental activities, such as (a) Sensing, which supplies the basic material of all our knowledge, namely the sensations, (b) Synthesizing or grouping of this material in the form of complex wholes, (c) Motor Reaction and adaptation to the various sensory experiences, (d) Imaginal contribution of the mind to the sensory material for ready and quick construction of an objective whole, (e) and Unconscious Projection of all the internal mental processes and contents on the stimulus. Each of these factors of perceptual knowledge has something to do with the aesthetic appreciation of the object. But unfortunately our knowledge of the perceptual process is not yet sufficiently advanced to enable us to make definite statements, for instance, as to why some qualities of sensory material are appreciated and why not others; why certain combinations of qualities are more beautiful than others; and why a certain intensity of the various qualities is the prerequisite of their beauty. Perhaps the reasons are physiological; perhaps they are supra-psychological. Experimental study can only formulate generalizations about them, ands uch generalizations have been formed by a number of physiologists and psychologists, especially in the field of vision and hearing, the sensations of which are projectible in greater degree than those of other fields, and hence more capable of aesthetic appreciation. Some of these generalizations are : In order to be aesthetically appreciated the sensory material must have a certain degree of intensity and complexity; colours must be bright and clear, sounds harmonious; colours must have certain hues, certain degree of tint, and certain amount of saturation; tones must have certain pitch, volume and intensity. Contrast, succession and habituation and many other physiological and psychological factors, such as heredity, nervous energy, sensory capacities etc. affect considerably the aesthetic quality of the sensory material.

2. *The Form in which the Sensory Material is arranged is* even of greater significance from aesthetic point of view. If the sensations are many, but of the same quality in different intensities, they must be experienced in a *graduated* manner. In music, for example, they must be arranged in crescendo and diminuendo way, and in the field of colour the tint and saturation must decrease or increase gradually, in order that the whole object may be aesthetically appreciated. Further the arrangement of sensory material in space and time must be characterised by *regularity*. Regularity in sound gives rise to rhythm, rhyme or assonance, and that in the visual form to symmetry, proportion, and that in colour-arrangement to pattern. All these

qualities have always been regarded as essential attributes of the beautiful. According to Aristotle, "The essential characters composing beauty are order, symmetry and definiteness." Philosophers have been in search of the most aesthetic proportion of length and breadth of objects occupying space, and they hit at what is known as the "Golden Section" or "the Divine Proportion" which consists in the shorter dimension of an object being in the same proportion to the longer as the longer is to the sum of the two. Fechner and other psychologists have made experiments on its claim. Experimental evidence shows that although not invariably so, this proportion is often preferred in the case of rectangular figures. When the sensory material grouped under a complex whole is manifold, complex and of varied nature, the whole will be aesthetically appreciated in proportion as it is a unified, organised and systematized one. Unity in multiplicity is the soul of all art.

3. *Motor Adaptations and Organic Reactions* which form part of all perceptual processes also go to a great extent in colouring our aesthetic appreciation of an object. Every stimulus disturbs the equillibrium of the organism by releasing and arousing its nervous energy. This energy finds an expression both in the form of unconscious and reflexive adaptive activities and of the organic changes which constitute our emotional mechanism. Both of these kinds of motor reactions accompanying the perception of an object play a great role in our aesthetic appreciation of it. They determine the life and warmth of the experience, without which beauty would not be what it is. It would then be a cold and lifeless intellectual affair.

4. *The Imaginal Content of Percepts* :—All perception involves a good deal of imagination. The actual sensory material in percepts is very little in comparison to what is supplied by the mind in the form of images and projected on the stimulus and fused with the sensory material. Sometimes the images projected by the mind assume the vividness of sensations, as in the case of eidetic imagery. Revived and projected images are not confined to the department of the sense which is actually stimulated ; they come from all departments and thus make the percept a complex whole. The laws of association play their part fully and bring to the focus of consciousness all sorts of associated memories which enrich and modify the perception. The aesthetic value of the percept is, therefore, bound to be affected by the relation the revived imagery and associated memories bear to the total personality of the percipient ; and naturally very often the aesthetic appreciation of the actual

sensory material and the form in which it has been presented is very much altered by this imaginal factor. As Burt has put it, "The majority of people, when asked to judge the beauty of an object, seldom really think of its beauty at all. They offer not aesthetic judgments but personal judgments. All kinds of irrelevent factors seem to affect them" ("Psychology of Art" in *How Mind Works, p.* 288).

5. *Hedonic Tone* :—The core of aesthetic appreciation is its pleasant hedonic tone. All other factors of the experience vary and change. Can we then identify beauty with pleasure? No. All pleasure is not beauty whereas all beauty is pleasure. Pleasure is often experienced beyond the sphere of aesthetic experience. We have an agreeable feeling when our organism is active within its nervous capacity; when we take rest after hard work; when our organs are functioning harmoniously; when any of our mental activities is effectively exercised without any conflict, obstruction and friction; when our desires are being progressively realised; and so on. In all these experiences we are more or less aware that the pleasant feeling is a subjective experience, a state of our own mind. In aesthetic appreciation, however, we have the delusion and illusion that pleasure is an objective quality of the thing we regard beautiful and that it is actually apprehended by us in the object as other qualities are. The object appears to be a stable and common source of pleasure. In the words of Keats, "A thing of beauty is a joy for ever." Marshall, therefore, has defined beauty and ugliness as "Beauty is relatively stable, or real pleasure." "We call an object beautiful which seems always to yield pleasure in impression or contemplative revival." "Ugliness is relatively stable, or real, disagreeableness....We call an object ugly which seems always to yield disagreeableness in impression or contemplative revival" (Marshall: *The Beautiful,* p. 75, 79). According to Santayana also, "Beauty is pleasure regarded as the quality of a thing." "It is pleasure objectified." (*The Sense of Beauty*). Psychologically speaking, it is more correct to say that I regard that object beautiful which pleases me and gives me a promise of pleasure. It is a delusion of mind that what pleases me will please all and what pleases me at this moment will always please me. In reality, however, it is not so. The hedonic tone aroused by any object depends upon many physiological, subjective and attitudinal factors of the percipient and may be considerably affected and altered by "All sorts of individual 'internal' factors, which depend upon the motivational systems of the personality and have been learned and matured in the life of the individual" (Butler and

Karwosky: *Human Psychology*). Some of these factors we shall study here.

6. *Attitudinal Types*:—The hedonic tone and consequently the aesthetic appreciation of an object or situation depends to a great extent upon the habitual attitude a person has towards objects of his experience. Psychologists have differentiated four main types of attitude, namely, the Associative, the Physiological or Subjective, the Objective and the Character type. In the case of the first type, the hedonic and aesthetic judgments are influenced by a large number of associations aroused by the stimulus. In the physiological or subjective type the attention of the percipient is very much directed towards the internal physiological disturbances and subjective states. Such a person cannot wholly be occupied with the object and so cannot project his hedonic tone outside his organism. He is more occupied with himself than with the object and therefore fails to appreciate it aesthetically. He differentiates between the subjective and the objective elements of his experience and gets quickly disillusioned. The objective type is critical and intellectual rather than emotional. Their perceptions are less coloured with emotions and feelings. Such people seldom find beauty in objects. Persons of the character type are those who are apt to project on the object their own subjective states, feelings and emotions. They read in the object much more than the object expresses. Even inanimate objects are perceived by them as if they were living personalities. Nature is a living reality for them. It is from this type of people that poets and artists come. No other type of personality could have produced a poem like the *Meghaduta*.

7. *Expression of Meaning*:—The character type reads meaning in every aspect of the object. Hence he appreciates it more than others can do. But the aim of an artist is to express meaning through his creations so that even people of other types may apprehend it without much effort. The greatness and success of an artist consist in expressing the greatest amount of meaning through the least amount of material and through the most ordinary forms. A picture, a statue, a building, a song, a poem, a story or any other literary creation, in order to be appreciated as beautiful must give expression to some great thoughts, feelings and emotions of the artist which he wants us to share in common and which are such as we can share with him. As Leary puts it, "Art is the language of the emotions, and of the wishes and desires common to the group." Croce, the Italian philosopher, has, therefore, laid a great em-

phasis on expression. He says, "What we admire in genuine works of art is the perfect imaginative form in which a state of mind clothes itself." "What we seek and enjoy in art, what makes our heart leap up and ravishes our admiration, is the life, the movement, the passion, the fire, the feeling of the artist." What is true of art is also true of natural objects. It is not the mere sensuous richness nor the mere form of natural objects which is appreciated by us, but the meaning which we read in them on account of their suggestive and expressive appearances. The more does nature mean to us the more does it appear beautiful. The same is true of human and animal forms. They appear beautiful to the extent the thoughts, feelings and emotions liked by us peep through them.

8. *Empathy, Projection, Hallucination and Delusion :*-- It is, however, very difficult to say how much of the meaning read by us in the object is actually expressed by the object and how much of it is imposed by us on the object. To a lover, to a poet, to an artist, to a religious man and to a paranoic insane things and persons mean much more than what they actually express. So is the case with the ordinary people when they are in some strong emotional excitement. Even in normal life there is a very common tendency to read meaning in things, which is of our own making. We can never successfully draw a line between what is objectively given and what is imposed upon it by the subject. We always interpret the objectively given in our own way. We project our own ideas, feelings, emotions, and wishes on the object, so that "We see things not as they are but as we are." Appreciation of beauty is no exception to this law of projection. Lipps has especially drawn attention to this factor. He calls it Einfühlung or Empathy which means "imaginal or mental projection of oneself into the elements of a work of art or into a natural object." In all appreciation of beauty there is a good deal of empathy. To a great extent beauty is the mask of our own making which we unconsciously place upon the object and perceive it there and wrongly believe that it is the true and stable appearance of the object. The mask is made of a very complex psycho-physiological texture, but the intensely pleasant hedonic tone is its main element. We apprehend a woman as beautiful primarily because we project upon her all the organic feelings of pleasure aroused in us by the sex impulse, its control and exercise, etc.

9. *Sexual Impulse*, therefore, plays a very important role in aesthetic appreciation. According to some thinkers, it is the only and the basic factor determining our aesthetic

judgments. "The beautiful", writes Will Durant, "is primarily that which is sexually desired ; and if other things seem beautiful to us it is so derivatively and by ultimate relationship with this original fount of the aesthetic sense." "Our susceptibility to the beautiful tends to rise and fall with the curve of generative potency." The proof of this theory lies in the simple fact that woman is the primary object of beauty for man and in her those parts and aspects are the centres of and marks of beauty which are primarily and secondarily concerned with sex. The softness and brightness of the face, delicate bony structure, rounded forms, well-developed and tight breasts, broad pelvis, soft and hairless body-skin, rounded contours, long and abundant hair, soft and melodious voice, etc. which are the effects of the gonadal hormones of the interstitial cells, and which are called the secondary sexual characters particularly because they are the indicators of the sexual maturity and fitness of the woman, have always been regarded as marks of beauty in women in all civilized communities which have learnt to cover the primary sexual characters, the sex-organs. Among the primitive peoples, where it is not so, it is the primary sexual characters that are marks of beauty in men and women. An aesthetically admirable person among them is "one whose sexual characters are either naturally prominent or artificially rendered so" (Ellis). The same is the case with the secondary sexual characters among civilized people. Woman in herself is not beautiful for man. She is beautiful only in proportion to man's desire for her, and the intensity of the desire depends upon the strength of the sexual impulse in him and also upon the delay and obstruction it finds in being satisfied. Continence of man beautifies woman. On the other hand even the "most beautiful damsel" loses all charm and becomes an object of repulsion after coital orgasm when the sex impulse is at its lowest ebb in man. Woman's sexual physiology being a little different from that of man, her standard of aesthetic admiration is different and the story of the vicissitudes of her aesthetic appreciation for man is also different. We need not enter into these differences and details here for want of space.

Sexual impulse being shared in common by all men in greater or less degree, there is this general agreement in the aesthetic standard that woman is the most beautiful object for man. As Will Durant puts it, "For our race the loveliness of woman is the highest form of beauty, the source and the standard of all other forms" (*Mansions of Philosophy*). But as men have differences of race, country, colour, culture, social influence, tradition, heredity, individual conditioning and sub-

jective interest etc. the ideal of male or female beauty is modified and specified in the case of each individual, so that no two persons may agree in their judgment with regard to 'the most beautiful' man or woman. I am tempted to quote here Havelock Ellis in this connection. "Underlying the conception of beauty, more especially as it manifests itself in woman to man are to be found at least three fundamental elements: First there is a general beauty of the species; then there is a beauty due to the full development or even exaggeration of the sexual and more especially the secondary sexual characters; and last there is the beauty due to the complete embodiment of the particular racial or national type. To make the analysis fairly complete must be added at least one other factor: the influence of the individual taste. Every individual....builds up a feminine ideal of his own, in part on the basis of his own special organization and its demands, in part on the actual incidental attractions he has experienced....Another factor in the constitution of the ideal of beauty....is the love of the unusual, the remote, the exotic. In every great centre of civilization the national ideal of beauty tends to be somewhat modified in exotic directions, and foreign ideals, as well as foreign fashions, become preferred to those that are native" (*The Psychology of Sex*, Vol. III p. 183).

From woman who is the primary object of love and hence of aesthetic appreciation, beauty overflows to all other things associated with her by the process of "conditioning." As Will Durant puts it, "The aesthetic emotion which accompanies the instinct of love may overflow from the person desired to objects attached to her, to her attitudes and forms, to her manner of action and speech, and to anything that is hers by possession and resemblance. All the world comes to partake of the fair one's splendour." The phenomenon of fetishism is only an extreme form of this tendency. The lover, in whom the sexual impulse is at its highest peak of stimulation finds beauty almost everywhere. When the passion of love subsides the appreciation of nature ebbs. Neither woman nor nature has any charm for the child and for the sexually exhausted man. Love is also the strongest motive in the creation and appreciation of all art and literature. I have rarely seen a film-picture which does not centre round love and its vicissitudes. Beauty, therefore, whether of persons, of things, of nature or of art is the child of love which originates in sexual impulse. "Lovely is primarily that which is loved."

10. *Instinct and Desire* :—I entirely agree with the view that sexual desire is a great source of beauty and quite a large

majority of our aesthetic judgments are ultimately based on conscious or unconscious sex motive, as stated above. But I do not hold that it is the only source of beauty. Sexual desire is a fount of beauty not because it is sexual, but because it is a desire deeply rooted in our instinctive nature, and a very strong, persistent, ever-recurrent, irresistible and socially tabooed but secretly cherished desire. In strength and importance it ranks next to and often vies with the desire for food. But as the latter is not socially tabooed, morally and religiously denounced, and its satisfaction is more or less easily secured, the former which meets the opposite fate naturally takes too much hold upon human mind. Other desires rooted in other natural instincts, parental, gregarious, inquisitive, possessive, etc. when unsatisfied, stiffled and strong, or when progressively satisfied, lend the same charm to objects as the sexual one does. To a woman, the potential or actual mother, the baby is a very beautiful object and her own baby the most beautiful in the world. To an unemployed and hungry man bread is more beautiful than woman and the dining halls more attractive than dancing ones. To the miser money and coins are more charming than bread and woman. For a traveller the sight of a shady tree or of an expanse of water on a desert land is delightful. For an inquisitive soul books have an unparallelled charm. The products of our own creative activity are always beautiful. Examples can be multiplied *ad infinitum*. It is, therefore, a strong desire or instinctive impulse that lends charm to its object, no matter what that desire is and no matter what that object may be. The same object as was once attractive and charming becomes indifferent and often repulsive when the desire for it is either satisfied or dead.

11. *Psychic Distance, Otherness or Objective Independence of Object:*—The life of a desire is prolonged by its non-fulfilment along with a hope of fulfilment. It gets strength from frustration and obstructions. It meets death when its object is attained and firmly and finally secured. So, when the objects of our desire are ours, become parts of our possession or personality, of "me," they lose all charm for me. They will continue to be beautiful only so long as they are something in their own right and independent of me, as long as I have to make some attempt to have them in my possession, and as long as they are at a certain distance from me which I long to annihilate. Distance lends charm to things. It conceals their faults, shortcomings and blemishes, and magnifies their desirable qualities and aspects. Psychic distance keeps the longing and so the charm of the longed for one alive. "When the desired object

is securely won, the sense of its beauty languishes. Few men are philosophic enough to desire what they have and fewer still can find beauty in what no longer stirs desire," as Will Durant puts it. The main reason why the stimuli of taste, touch and smell are not regarded beautiful is that they are not physically distant enough, as those of sight and sound are.

12. *A general Craving for what we are not and for what we have not*:—Desire which lends charm to its object is rooted in a deeper human psychological tendency, namely, to transcend oneself, to be what one is not and to have what one has not. Our ideals are always charming, and so the objects not in our possession.. We feel imperfect and poor before our ideals and incomplete and miserable without what others have and we do not have. We are disturbed, restless and joyless throughout our life on account of this deep-rooted tendency. But every step towards the realization of our ever-progressive or ever-changing ideal and attainment of every object that we did not, but wanted to possess, relieves us from this tension for a moment in which we feel lifted to heaven and have a transient experience of repose, restored equillibrium, self-completeness, perfection and wholeness. The chief reason for this experience is the temporary negation or annihilation of the craving, but the experient feels wrongly that it is the object that brings it about. So, two diametrically opposed theories are based on this psychological fact. Puffer, in his *The Nature of Beauty*, maintains that "The beautiful object possesses those qualities which bring the personality into a state of unity and self-completeness." Schopenhauer emphasises that the object is apprehended as beautiful when we are so much absorbed in it that the will (eternal craving) is for the time being negated. Aesthetic appreciation is, according to him, "will-less perception."

13. *Hedonic Habituation, Novelty, and Change*:—"Familiarity breeds comtempt," a popular saying, is to a great extent also true in the field of aesthetics. The old, customary and familiar loses all charm for us although it may stir the imagination of others for whom it is new and unfamiliar. The familiar and customary become a part and parcel of our experience and so do not call for a new adjustment, do not stimulate activity in us and do not arrest our attention. In the presence of the new and ever new objects we are alert, attentive, alive and active. And "anything takes on beauty if it stimulates and invigorates the organism." The constant in our experience soon becomes indifferent and in course of time repulsive; hence ugly. A Samskrit poet, Magha, therefore, says that beauty

consists in appearing new at every moment. Habituation, it may also be pointed out, works both ways. As it takes away or modifies the beauty of things, it considerably modifies and often takes away ugliness of objects too. We become used to the painful, the dull and the intolerable elements of our experience in course of time and cease to regard them as detestable.

14. *The Social Influence* :—Every individual is a member of some group and is very much affected by the activities, emotions, opinions and judgments of the group. The family, the community, the race, the religious fraternity and the political party—all exercise their influence on my aesthetic judgments. They often give the individual ready-made, stereotyped, and standardized notions of beauty and ugliness, which he unconsciously accepts and from which he hesitates to deviate unless and until he becomes highly individualised and ego-centred. Ordinarily men do not like to disagree with the judgments of their fellowmen. In the course of an article on "The Place of Aesthetics in Social Psychology" in the *British Journal of Psychology*, 1936-37, Dr. Herbert Longfeld points out that in judging a thing beautiful or ugly we are anxious that our neighbour's judgment should agree with that of ours. If it does not, I begin to doubt the soundness of my own taste.

15. *The Unconscious Complexes* :—Psychoanalysis has thrown a flood of light on the hidden and unconscious springs and motives of many of our hitherto little understood activities. It has revealed how greatly we are influenced in our aesthetic appreciation, moral judgments and religious beliefs by the unconscious but active and powerful complexes which have been in course of our life formed by gathering together of a host of unsatisfied and repressed instinctual desires and wishes. One of such complexes is "the Oedipus Complex" the essential element of which is the repressed and unsatisfied wish of the baby to wholly possess and enjoy the company of the mother in case it is a male and of the father in case it is a female baby. This complex influences us aesthetically in so far as we regard those girls alone beautiful who bear likeness with our mothers and those boys as beautiful (in case we are girls) who resemble our fathers. Other repressed desires and wishes similarly get some sort of satisfaction, real, fanciful or vicarious through an object which often acts as a symbol for the original object of the repressed wishes and desires. The feeling tone in the contemplation of such an object is very disproportionate to the conscious relation we bear to it. Hence we often do not know why we judge an object as beautiful or

ugly, although we do so very categorically. W. R. D. Fairbrain lays emphasis on this very factor when he writes in the *British Journal of Psychology,* Vol. XXIX pp. 177 on "The Nature of Aesthetic Experience," "Aesthetic experience may be defined as the experience which occurs in the beholder when he discovers an object which functions for him symbolically as a means of satisfying his unconscious emotional needs." "A work of art only acquires an optimum of aesthetic value for the beholder in so far as it enables both his repressed urges and the demands of his super-ego to obtain a maximum of satisfaction."

15. *Other Factors* :—Besides the above-mentioned factors there are others which play their own part in aesthetic appreciation and modify and influence our judgments. Heredity, Maturation, Learning, Age, Physical Type and Sex are some of them. We inherit different degrees of intelligence-quotient and of sensory discrimination and they determine our interests and affect our aesthetic appreciation. A certain stage of psycho-physiological development must be reached before we acquire aesthetic appreciation. We learn to enjoy things and their beauty—more and more in course of time, and what we enjoy at one stage of life we fail to appreciate at another. The tastes of the same man differ at different ages, and those of husband and wife seldom agree simply because they belong to two different sexes. Man's standard of beauty is bound to be different from that of woman.

ADVANCEMENT OF KNOWLEDGE BY MEANS OF WRITING AND PRINTING

Satisa C. Guha

Writing in any form is symbolic. Every sentence, nay a word, or even a single letter, is the visual representation of ideas. It may be a direct reflection, or a reflection of reflection, or say, a reproduction—exact, miniature or magnified.

From time immemorial ideas have been preserved in language, either by sound uttered or by symbol drawn, one being called spoken language and the other written, which latter includes drawing. And the ideas have been transmitted from man to man, notwithstanding the barriers of time and space.

Direct transmission is rather limited, although its power can be enhanced by repeated human agency. When however the sound or symbol is multiplied by a mechanical process, prospect of transmission becomes unlimited. The radio transmits the sound, and the printing press the symbol.

The word uttered or written is mightier than the sword or even the sceptre. Armies have retreated before it, powerful people and parliaments have come to terms with the public will, aroused by the word spoken or written. Look at the West at the close of the eighteenth century when speeches delivered from the platform and written copies thereof multiplied by printing—in a word, pamphleteering—played so large a part in precipitating the popular movements on either side of the Atlantic.

The Aryan in the Orient had realized long ago the significance of sound. To him SABDA—sound, as represented in the word—is Brahma, God Himself!

The word when preserved in the visual form is painted by the pen. The power of the pen has advanced multifold with the advent of the printing press. The other auxiliary labour-saving and multiplicatory processes, from typewriting to photography, have again greatly augmented the work mightily begun by the printing press.

§ 2

As in many another matter this light too originated from the east; for it is the Chinese who had anticipated the occidental discoverer by centuries, both in a wholesome woodcut reproduction known as block printing, as also in movable types called

typography. *Printing on paper* and other materials in that great country was being done during the Hān dynasty of kings between 202 B.C. and 221 B.C. and the practice continued ever since. *Printing in the form of books* however was probably evolved some time after ; and the evidence we find today of actual book-printing shows that it was in vogue in 868 A.D. Dr. Arthur W. HUMMEL has observed this in his presidential address at the last annual meeting of the American Oriental Society, as published in the Society's *Journal* for June 1941. He mentions, as we find from the *Indian P.E.N.* for November 1941 (p. 200) that 'the earliest printed book which can be dated, the *Diamond Sutra*, in the form of a scroll, was produced in 868, nearly six centuries before the Guttenburg Bible.'

"The Development of the Book in China" was the subject dealt with in Dr. HUMMEL's address referred to above. His survey goes back three thousand years to the inscriptions on the decorated magic bones discovered in Hunan Province in 1899, which are assigned to the Shang dynasty and to the 13th and 14th centuries B.C. In the country's classics there are references to and excerpts from lost books of ancient China. The first books proper were on narrow strips of wood or bamboo, laid side by side and held together by two cords near the two ends, almost exactly like Indian palm-leaf manuscripts and the more recent printed books of religious character, such as the Gītā, the Chaṇḍī, etc., occasionally printed on palm leaves instead of on paper.

The silken roll-form of books, or scrolls as they are called, was apparently in use in China, previous to the 4th and 5th centuries before Christ, as Dr. HUMMEL observes, and paper books also retained the scroll form exclusively for 500 years after the invention of paper early in the second century of the Christian era. The many thousands of paper scroll sealed up in 1035 A.D. in the 'Cave of the thousand Buddhas' at Tunhuang, Kansu, which was discovered in 1907 show developments from the 5th to the 11th centuries. The scrolls comprising a single-work were arranged in pyramids of 5 or 10 and encased in a wrapper of brocade or of bamboo screening. The pleated triplicate or fourfold scroll of the T'ang period (618-907) was a step in the direction of paged book, afterwards invariably followed both in printed and written books, and the folded album generally containing illustrations or specimens which appeared five centuries ago was a further intermediate stage.

From China the art of printing on paper was learnt by Korea, Japan, Tibet and also by the Mongol races.

It is rather striking that India—having direct business and cultural relations with China and the other countries mentioned, more specially with Tibet where many a Buddhist scholar went from our Universities and monasteries—does hardly furnish convincing evidence of paper-printing being in vogue for purposes of document or dissemination of ideas or knowledge. We have no doubt our equally old inscriptions on stone and metal, manuscripts on paper[1] or like substance, coins with fine imprints cut out of the mint, but we can hardly find any printed book like what we get in ancient China. Printed designs and illustrations on calico or other sorts of woven material, cotton or silk, were however exported from India to remote countries and the printed *nāmāvali* sheets for wrapper and turban used to be worn in very ancient days, as we find the use still current.

§ 3

Let us now see how and when printing on paper in the modern ages was introduced, if not reintroduced, in India, in the matter of Indian languages.

In 1497 the Portuguese led by VASCO DA GAMA came to India for the first time and the first printing press was established by them in Goa in the middle of the 16th century. From Europe they brought the Roman Types which were used in the first instance for the Indian languages so far as printing was concerned. By means of printing in the Roman script the Portuguese in Goa were rather instrumental in developing a literature in the local vernacular, the Southern branch of Marāthi, known as *Konkani*.

Of Indian scripts Tamil had the good fortune of leading the printing of books in any Indian language in India, for whatever printing we find in earlier days was from woodcut blocks having symbols or illustrations on the one hand, and on the other, prayers (*mantras*), and repetitions of divine names in Kharoshti, Brāhmi and Bengali scripts for printing *not* on paper, *but* on calico or silk for purposes of wrapper and turban. In 1577 Tamil script is first printed in the city of Cochin, in Malabar, by a Jesuit Missionary Father, Joannes GONSALVES, who prepared the types[2] in Tamil for the first time and since then Tamil printing has been growing steadily till to-day.

1. Use of paper was in vogue during Alexander's campaign in 327 B.C., as chronicled by his companion, who wrote that paper made from cotton was used for writing. (G. H. Ojha's *Prāchina-lipi-mālā*, p. 144) Max Muller had also said the same thing in his *History of Ancient Sanskrit literature*, p. 367.

2. *Linguistic Survey of India*, v 4., p. 310.

After that a Bengali Grammar as also a Bengali-Portuguese Vocabulary, both in the Roman script, were prepared by a Portuguese missionary, Father Manoel da ASSUMPCUM in 1734, and printed after 9 years in the same Roman in 1743 at Lisbon. A facsimile reprint of that grammar in the "Original Portuguese with Bengali translation and selection from his Bengali Portuguese Vacabulary" was published in 1931 by the Calcutta University under the joint editorship of Prof. Dr. S. K. CHATTERJI and Prof. P. R. SEN.

We must remember that this Bengali print was not done in India, nor in an Indian script. The first regular Bengali book printing in the Bengali script was however done after 200 years of the first Tamil print. In 1778 Nathaniel Prassey HALHED's *Grammar of the Bengali Language* was printed in the Bengali script in Hugli. Sir Charles WILKINS[3] had prepared a set of Bengali punches with his own hands for founding Bengali lead-types. He is therefore virtually the founder of modern Bengali printing.[4] Sir Charles had especially trained a local artisan, Panchanan KARMAKAR, by name, for this handicraft. On his retirement from India this Panchanan KARMAKAR was engaged by Dr. William CAREY of the missionaries of Serampur (Srīrāmapura) and type-founding as a trade has been going on in Bengal since then. Through the labours of Panchanan Karmakar and his relative and colleague Manohar the art of punch-cutting became domesticated in India Dr. D. C. SEN[5] quotes from *The History of Cri Rampur Mission*, vol. 1, p. 179, to show that to Panchanan's assistant, Manohar KARMAKAR, who served the Srirampur Press for 40 years, "Bengal is indebted for the various beautiful founts of the Bengali, Nāgari, Persian, Arabic and other characters which have been introduced into the different printing establishments." (p. 852).

[3] Sir Charles WILKINS as one of the earliest Sanskritist-Indologists was a co-worker with Sir William JONES in founding the Asiatic (lately Royal Asiatic) Society of Bengal.

[4] Dr. D. C. SEN maintains that the art of printing in a crude form was known in Bengal before Sir Charles WILKINS came to the field. "We have come across a MS 200 years old, which was printed from engraved wooden blocks. But the art was not in general use." (*History of Bengali Language & Literature* p. 849).

Dr. Sen must be referring to the hand-written copy on paper, having printed decorated boarders or other designs, we still find in use.

[5] SEN (Dr. D. C.). *History of Bengali Language & Literature*, Cal. 1911, p. 848 & 848-9; *History of Bengali Literature in the 19th century* by Dr. S. K. DE (Cal. Univ.) p. 78, etc.

Before 1778 we have only specimen illustrations of the Bengali script in two or three books in European languages. (1) In 1725 George Jacob KEHR brought out his Latin book on Oriental numismatics, dwelling on AURANGZEB's mints for silver and other coins at Delhi or Jehanabad. It was published from Leipzig, Germany. On p. 48 of this book the numerals are shown in the Bengali script, and a plate (opp. p. 51) consists of the Bengali consonants, with an example of the transliterated form of a German name, Sergeant Wolfgang Meyor. The British Museum in London has a copy of this book. (2) In 1748 Johann Friedrich FRITZ published from Leipzig his German work entitled *Orientalischer und Occidentalischer Sprachmeister*. In this book the illustration of the Bengali consonants was reproduced from G. J. KEHR's Latin work. (3) In 1843 was published David MILL's work in Latin, "Dissertatis Selecta" in which we find illustrations of finely drawn Bengali and Devanāgari scripts.

The first illustrative reproduction of Devanāgari script was however found as early as in 1667 in Athenasius KIRCHER's *China Illustrata*, published from Amstradam, in 1667. Printing from movable types[7] in Devanāgari and Kāethī scripts is however found in 1761, being 17 years before we get HALHED's *Grammar of the Bengali Language* (1778), and 184 years after we had the first Tamil print in Malabar as we have seen.

It will be worth while to note that Father ASSUMPCAM's Bengali grammar and Bengali-Portuguese vocabulary were written by him while at Bhāwal[8] in the district of Dacca. The small town of Bhawal was in those days a great centre of Portuguese Christian missionaries. It is also known that Father ASSUMPCAM was also the translator of a Portuguese work into Bengali under the title *Crepar Xaxtrer Orthbed*, an incomplete copy of which is in the Library of the Asiatic Society of Bengal, and a second copy is found in the Public Library at Avora in Portugal. ASSUMPCAM was also intimately connected with another early Bengali work[9] in the form of a Christian dialogue by a Bengali convert who had adopted the name Dom Antonio

[6] 'Aurenk Szeb' and 'Dshihanabad' in the original.

[7] Cassiano BELIGATTI's *Alphabetum Brahmanicum seu Indostanum Universitatis Kasi*, Romae, 1761 (*Linguistic Survey of India*, v 9, pt.1, p. 4 & 9-10.

[8] The name of this place has become well-known in recent years on account of the interesting law case known as the *Bhawal Sannyasi Case*, published in 1941 by the Anglo-Oriental Press, Benares.

[9] The Portuguese title of the work is *Arguments disputæ sobre a lay*.

DE ROZARIO. The manuscript of this latter is found in the Avora library. Evidently the Father had taken the manuscript to his own country either for printing or other reasons.

It is interesting to note that a large number of Portuguese words are found in modern Bengali.[10] It can be taken that in the later 16th century the Portuguese missionaries in Bengal had not only learnt the Bengali language but also enriched it by introducing a thought-current on the lines of Christian ethics, and during the years 1590-1600 an Indo-Christian Bengali literature (similar to that in Goa) developed in the vicinity of Dacca, and the same was current for about 150 years in the Christian community of eastern Bengal. TAVERNIER in his travel description, written about 1600 A.D., speaks in praise of the architecture of the St. Agustus Church in Dacca. BERNIER, a Frenchman, again, about 1669, also writes to say that in Bengal alone there were about eight to nine thousand families of Feringhees or the Portuguese. (Introductory portion of the Calcutta University edition of ASSUMPSAM's *Bengali Grammar*, p. x). There is no doubt that the Portuguese helped our modern printing in so many parts of India, notably in Goa and Bengal.

In this connection it may be interesting to note that some of the words found in Dom Antonio DE ROZARIO's book, *Arguments disputoe sobre a ley* (a transcribed manuscript copy of which is still in existence in the Public Library at Avora in Portugal) tally almost exactly with what we find in Aśokan inscriptions of the 3rd century B.C.—an interval of 2000 years! As for example, to indicate *pūrva* (meaning 'past' in Sanskrit) Dom Antonio writes 'prob', 'prube' and 'probbe' (pages 6, 41 and 51 respectively of the Calcutta University edition). In Aśokan Shabazgarhi inscription we find 'pruve' (iv/8), 'pruva' (v/11), 'pruvam' (vi/14); while in the Mansera inscription we get 'pruva' (v/21), 'pruve' (vi/27) and 'pr [u]ve' (iv/14).

As one of the earliest prose works in Bengali the book is full of specimen of the 17th century Bengali. A number of phrases and idioms used by Dom Antonio is current till to-day in some of the eastern parts of Bengal. The vocabulary used in the book indicates that the phonetics of the Eastern Bengal dialect have undergone very little change during the last 250 years.

[10] *Vange Portuguese Prabhāva* by A. GHOSHA in the *Journal o the Vangiya Sāhitya Pariṣat*, 1318 B.S., pt. 1; *History of the Portuguese in Bengal* by J. A. CAMPON, Cal., 1919.

§ 4

We have seen that the art of printing was in olden days known only in the Orient. In Europe six hundred years ago every copy of a book or document was written by hand. It is only in 1440 that types were first cut by Johann Guttenburg in Strassburg (in Germany). In fact Europe re-discovered the art five hundred years back. But it is also true that Europe has amply honoured the fore-runners by popularizing the newer and quicker methods of operation to their slumbering successors.

This re-discovery of the printing process has revolutionized civilization. Its social and cultural influence is immense. Formerly all composition or writing was generally done in poetry, for the reason that verse was then a better vehicle of ideas to travel, more suited for memorising as also for oral delivery, than prose in those days. The printing press is daily driving illiteracy and has made the number of lecture-listeners (except in the case of the radio of the recent time) comparatively smaller, increased that of the readers by millions. Printing is a permanent uplift to the prose that has so enriched the literature of all countries for half a millenium at least. The democratizing force of printing again is no less. As a leveller it is perhaps second only to Yamarāja, Death!

With all the elevating qualities, however, printing, like all machinery, is not an unmixed good. Just as it has the power to preserve or improve civilization, it has in itself the germ too of destruction, which may come to the forefront the moment the Devil has an upper hand in the machinery. Look at science to-day—how has it been lately used for the destruction of humanity rather than accelerating its evolution. Let us listen to Oliver Schreiner, when he says that 'a train is better than an ox-waggon only when it carries better men ; rapid movement is an advantage only when we move towards beauty and truth ; all motion is not advance, all change not development.'

And finally, let us remember the principle enunciated by the BUDDHA 2000 years before the advent of the printing press of the modern age:

> "Though a poem consists of a thousand couplets, if these be lacking in sense, better a single couplet full of meaning, on hearing which one is at peace."

THE DAUGHTER'S SON IN THE BENGAL SCHOOL OF HINDU LAW

BRAJENDUSUNDAR BANERJEE, M.A., B.L.

The right of succession of the daughter's son is more fully recognized in the Bengal School than in the other Schools of Hindu Law. But even in the Bengal School, his position is not very assured. Circumstances permitting, he may succeed to the entire estate of his maternal grand-father, who leaves no heir in the male line, and transmit it to his own line of successors. Circumstances failing, he or his successor may not get even an iota of the estate. It entirely depends on his surviving his grand-mother, mother and mother's sisters, if there be any, whose estates are ordained to intervene between his grand-father and himself. If he survives all these life estates, he would be the full and absolute owner of the inheritance. Otherwise, the inheritance will pass to the nearest surviving kinsman of the grand-father and the heirs of the predeceased grand-son will get nothing.

This state of the law sometimes produces very undesirable results. Thus, if the propositor is not succeeded by a brother or uncle the state might go to a comparative stranger though theoretically a kinsman, who, as compared to the grand-son is quite alien to the atmosphere or traditions of the family. Secondly, if some of the daughter's sons, die during the intervening life estates, the estate will pass only to the surviving daughter's sons, and the heirs of the former, would be entirely deprived of the inheritance.

Now, if it can be established, that a daughter's son acquires a vested interest in the property left by his maternal grandfather, and not an interest contingent or dependent on his surviving such estates, then the property will eventually pass to his heirs and the evil conseuqences referred to above will be avoided.

Our humble effort in these few lines would be to show, with due deference to eminent scholars, jurists and learned judges who have held otherwise, that Jīmūtavāhana, the founder of the Bengal School, contemplates in his famous work Dāyabhāga that a daughter's son acquires a vested interest or

remainder, as the legal phrase is, in the estate of his maternal grand-father, despite the intervening life estates which only defer the time of enjoyment of the vested interest.

In Section 125 of his famous work, Jīmūtavāhana says

तस्मादिति हेतूपन्यासात् दायभागप्रकरणे च
पुत्रादीनां नानाविध पिगादयुपकारकत्व कीर्त्त-
नस्य अनन्यप्रयोजनकत्वात् उपकारकत्वादेव
धनसम्बन्धो मनोरनुमत इति । गम्यते ।" दायभागः ।१२५।

That is to say, "Having stated that owing to this rendering of spiritual benefit he gets the property, and further there being no other reason possible, to be assigned, to the statement, in the Section dealing with the devolution of property, of the amount of spiritual benefit that sons and other heirs render to the father and others, it is quite clear that according to Manu, spiritual benefit is the only basis which establishes the relationship of predecessor and successor in respect of wealth, i.e. is the only basis on which a dead man's wealth is to devolve."

The doctrine enunciated in these lines is known among the Western Scholars as the doctrine of spiritual benefit. Jīmūtavāhana repeats this doctrine almost in every page of his work. It would be quite tedious if we quote here all the passages seriatim. We give below the numbers of two Sections that principally contain it : *viz.* Sections 166 and 172.

This spiritual benefit chiefly accrues by the offering of piṇḍas or cakes in the Srāddhas श्राद्धा: (obsequies) to the departed man. So Manu says "दद्यात् पिण्डं हरेद्धनम्" (मनु: ९।१६१), or in other words offer piṇḍas and take the money."

Now, two kinds of Srāddhas are ordained to be performed for the spiritual benefit of the departed soul : one is the Ekoddiṣṭa Srāddha and the other is the Pārvana Srāddha. In both of these, oblations of water and piṇḍas are offered by the performer to the departed soul, with this difference, that in the former, they are offered only to the departed soul while in the latter they are offered not only to him but also to his two immediate ancestors. The Ekoddiṣṭa is first performed on the eleventh day after a man's death. Then it is performed once every month throughout the year, culminating on the first anniversary of the death, on which day, the ceremony of Sapiṇḍīkarana, that is to say, mixing up of the Piṇḍas, offered to a dead man, with those of his two immediate ancestors in the male line. After this the Ekoddiṣṭa is directed to be performed once every year on the anniversary of the death. The Pārvana Srāddha

is to be performed after the Sapindīkaraṇa function, on certain specified days every year and on certain specified occasions. The chief specified day being the Mahālayā or the New Moon day immediately preceding the Durgā Pūjā.

Jīmūtavāhana makes the right of being able to perform the Pārvaṇa Srāddhas the crucial test, on which the right of succession to property depends. He says in Section 25 "यथा पैतामहधने पितुः स्वाम्यं तथैव तस्मिन्मृते तत्पुत्राणामपि। न तज सन्निकर्षं-विप्रकर्षभ्याम कोऽपि विशेषः। पार्बणविधिना पिण्डदानेन द्वयोरपि तदुपकारकत्वाविशेषात्।"

This means: "The right that a son possesses in his father's properties, passes fully in the case of his death to his sons. There would be no distinction on account of the nearness of relationship, for both father and his sons are equally entitled to confer spiritual benefit to the late owner by performing the Pārvaṇa Srāddha."

Then again in Section 125 he says, "पुत्रपदं प्रपौत्रपर्य्यंन्तपरं तत् पर्य्यंन्तानामेव पार्वणविधिना पिण्डदानोपकारकत्वस्याविशेषात।" Dāyabhāga 125. That is to say, "By the word son is meant, son, grandson, and great grandson, for up to them no distinction exists in the spiritual benefit, to be conferrable by the offering of Cakes according to the Pārvaṇa Srāddha."

In Section 171 he also says, "जीवत् पितृकयोः पौत्रप्रपौत्रयोः धनाधिकारः न सिध्यति। न जीवन्तमतिदध्यादिति श्रुत्या जीवन्तं पितरमतिक्रम्य तयोः पार्वण निशेधादनुपकारकत्वात्।" *Dāyabhāga*, 171. This means "It is clear that a grandson, or a great-grandson whose fathers are alive, have no right of succession, for by the maxim, no one can offer overstepping a living ancestor, they are debarred from conferring any benefit by the performance of the Pārvaṇa rite."

So we see that the conferring of spiritual benefit through the performance of the Pārvaṇa rite, is the paramount cause that enables one to succeed to a dead man's wealth. A grandson whose father is dead or a great grandson whose father and grand-father are dead cannot in any comparable measure confer spiritual benefit which a son does in other ways, not to say the nearness of his relationship, a factor admitted by Jīmūtavāhana himself as of some consequence; yet he makes the former succeed equally with the son only because they can perform the Pārvaṇa function as effectively as a son can do.

Summing up all this Dr. Abdul Madjid in his notes to his edition of Messrs West and Buhler's *Digest of Hindu Law*,

says, "The Dāyabhāga of Jīmūtavāhana bases the right of succession to property on the principle of spiritual benefit conferred by those who are competent to offer oblation at the Pārvaṇa Srāddha (obsequies), which is celebrated in honour of the deceased and his paternal and maternal ancestors every year on the day called Mahālayā." (Fourth Edition, page 142).

In the case of a person who dies without a male issue or whose son, grandson and great grandson have all predeceased him, the right of offering oblations and cakes goes to the widow and the daughter's line in the following order :—first, the widow, then a maiden daughter, then a married daughter, with a son already born or likely to have a son born, and lastly the daughter's son, with this great distinction that neither the widow, nor a daughter, maiden or married, can perform the Pārvaṇa Srāddha. They are entitled to perform the Ekoddiṣṭa Srāddha only. The only person, other than the son, grandson and great-grandson, who is entitled to perform the Pārvaṇa Srāddha, is the daughter's son.

So, now we come to this very important position. If the daughter's son is the only other person who can perform the Pārvaṇa rite, can we not say, that the daughter's son stands on a par with the three descendants in the male line in the matter of succession and should succeed simultaneously with them? There can be no two answers to this query, otherwise the performance of the Pārvaṇa Srāddha loses all its force as the guiding factor in the matter of succession, and Jīmūtavāhana would be the last person to countenance it. But how then does he postpone his right of succession not only to that of the three descendants of the male line but also to the life estates of the widow and the daughters'? He has postponed it to that of the three descendants in the male line because in addition to the spiritual benefit conferrable by the Pārvaṇa right, they confer a further spiritual benefit by the very fact of their birth. "पुत्रादिभिर्जन्मतः प्रभृति पितुः परलोकोचित महोपकारनिष्पादनात्" (*Dāyabhāga*, 125) "On account of the three descendants beginning with a son, rendering great benefit in the other world from their very birth." (Dāyabhāga, 125). He has postponed the daughter's son's succession to the life estates of the widow and the daughters, because it must be done so for some practical spiritual necessity. But he has taken care in this case to point out sometimes by express words and sometimes by clear hints, that the daughter's son gets a vested remainder during all these life estates. He must do so otherwise his whole argument falls to the ground. It is unfortunate that scholars and jurists have failed to appreciate these indications.

Let us see what he has said. He says in Section 126, प्रपौत्रपर्यन्ताभावेतु वैधव्यात् प्रभृति व्रतादिना भर्त्तुः परलोक हिताचरणेन....धन-हारिणी पत्नी" । *Dāyabhāga,* 126. That is "In the absence of male descendants up to the great-grandson, the widow, who confers bliss in the other world to her late lord by austere penances, is the taker of the wealth." Here it should be noted that as the widow cannot become a full owner, Jīmūtavāhana uses the word "धनहारिणी" (taker). But under special circumstances the widow can be a full owner and can dispose of the property as she likes. Attending to that Jīmūtavāhana says in the same section downwards अकार्य्यं कुर्व्वती पुण्यापुण्यफलसमत्वेन भर्त्तारमपि पातयिष्यतीतितदर्थं तद्धनं पूर्व्वस्वाम्यर्थमेव भवतीति युक्तं पत्न्याः स्वाम्यं ।" *Dāyabhāga,* 126. This means "Because the widow doing an impious act, drags down her husband, as they (the husband and the wife) share equally the effects of the piety or the impiety of either, her wealth goes for the benefit of the late owner. Therefore her ownership is proper." (Dāyabhāga, 126). Here Jīmūtavāhana uses the word, स्वाम्यं (ownership).[1] Then having stated the order of succession after the widow on the authority of Manu and Viṣṇu, Jīmūtavāhana says in section 135 "तत्र प्रथमं कन्यैवैका पितृधनहारिणी ।" "There the unmarried (daughter) first takes the wealth of the father." But as an unmarried daughter also can sometimes use the property as she likes, Jīmūtavāhana says again in the same Section "तस्मात्विवाहोपयुक्तत्वेन पित्रादीनां नरकनिस्तारकत्वात् परिणीतायाश्च पुत्रद्वारेणाप्युपकारकत्वात् तदर्थं धनं स्वाम्यर्थमेव भवतीति पत्न्याभावे न्याय्यं कन्यास्वत्वं । *Dāyabhāga,* 136. That is to say "As by her marriage she is to deliver her father from hell, and bearing a son after being married, she is to confer spiritual benefit through her son, wealth taken by her really goes for (the benefit) of the late owner, therefore the maiden daughter's ownership in the absence of the wife is quite proper. He again repeats here the word स्वाम्यं which means ownership.[1] Then he says "कन्यायास्त्वभावे सम्भावितपुत्रायाः पुत्रवत्याश्चाधिकारः ।" *Dāyabhāga,* 136 "After a maiden daughter, a daughter who is likely to have a son, and a daughter, who has a son already born to her, should get possession together" (Dāyabhāga, 136). There again the word 'अधिकारः' comes in and neither 'स्वाम्यं' nor 'स्वत्वं' both of which mean ownership is found.

Now let us examine what Jīmūtavāhana says with regard to the daughter's son's right. He says in Section 139, "येन दौहित्रस्यैव पिण्डेन दुहिता पितृधनाधिकारिणी तथैव तेनैव पिण्डदानेन दुहितसुतोऽपि मातामहधनेस्वामी ।" This translated means, "By means of that very 'piṇḍa', which is to be offered by a daughter's son, which makes the daughter the possessor of her father's wealth, the daughter's

[1] This will be discussed later on.

son, too, ["तथैव" i.e. as his mother gets the possession], becomes the owner of his maternal grand-father's wealth." Two things are to be particularly noticed here. First, Jīmūtavāhana uses the word possessor (अधिकारिणी) when he speaks of the daughter and in the same breath, uses the word स्वामी which means 'owner' as soon as he comes to speak of that daughter's son. Secondly, we shoud see, that he makes the self-same offering of the 'piṇḍa' by the daughter's son the generating cause of both the daughter's and the daughter's son's right. According to him by the very 'Piṇḍa' (तेनैव पिण्डदानेन) which is to be offered by the daughter's son, the daughter becomes the possessor (अधिकारिणी) and the daughter's son becomes the owner (स्वामी) of the wealth left by the departed man, or in other words, the ownership vests in the daughter's son, while the mother gets the possession of the wealth. Can there be a more express statement of a daughter's son's vested remaindership during the life estate of his mother?

This, Jīmūtavāhana makes still more clear in the following Section where he discusses the opinion of Govindarāja (गोविन्दराज:) an old commentator of Manu. He says "गोविन्दराजेन ऊढात: प्रागेव दौहित्रस्याधिकारी दर्शित: । स चास्मभ्यम् न रोचते । सदृशीसदृशेनोढेत्यादि विरोधात् । किन्तु ऊढाया: प्रागुक्तरूपायाश्चाभावएव दौहित्रस्याधिकार: ।"—*Dāyābhāga*, 140 This means: Daughter's son's possession before a married daughter has been maintained by Govindarāja. This does not appeal to our taste. For it is opposed to the couplet of Bṛhaspati, beginning with सदृशी सदृशेणोढा (a daughter belonging to the same caste and married to one also of the same caste). The daughter's son is to get the possession in the absence of such a daughter as described in the couplet (Dāyabhāga, 140). In this discussion it is quite clear that Jīmūtavāhana's difference with Govindarāja is only with regard to possession (अधिकार:). The latter maintains that a daughter's son gets possession in preference to married daughters, whereas Jīmūtavāhana holds that he gets the possession after the married daughters. Not on a single occasion has any word like स्वाम्यं, स्वामित्वं or स्वत्वं which means ownership, been used either by Govindarāja or Jīmūtavāhana. So it must be admitted that both are unanimous with regard to the vesting of the ownership in the daughter's son during the life estate of the mother.

The fact that the daughter's son is the holder of a vested remainder during the life estate of his mother is made still more clear by Jīmūtavāhana where he lays down that a married daughter, likely to have a son, is to get the possession simultaneously with a daughter having a son already born to her. He says: न च वाच्यं एवन्तर्हि पुत्रवत्या एव प्रथमाधिकारोऽस्तु तदभावेतु सम्भावित पुत्राया इति । यतस्तस्या पश्चादुत्पन्नस्यदौहित्रस्यानधिकारापत्ते: ।" (*Dāyābhāga*, 137)

This means: It should not be said that therefore, that is to say, because the conferring of spiritual benefit is the sole test of succession, a daughter with a son already born to her, should get possession first; and in her default, a daughter likely to have a son born should come in. This would be wrong. Because in that case a son subsequently born of the latter should get out of the properties altogether. Now if the remainder did not vest in the daughter's son during the life estate of the daughter, no difficulty would have arisen, if in strict accordance with the principle of spiritual benefit, the daughters with sons already born to them, were first given possession of the property, and after them came those daughters who were likely to have sons born to them. For, if the ownership of the daughters' sons comes after the extinction of all the intervening life estates, the priority of one set of daughters would not have affected their interests at all. But as Jīmūtavāhana thinks that the ownership vests in the daughters' sons during the life estates of the daughters he has specially ordained that both the daughters with sons already born to them and the daughters who are likely to have sons born to them are to come to the possession simultaneously. From this special ordinance of Jīmūtavāhana, his commentator Srīkrṣna Tarkālaṁkāra argues that as the maiden daughter gets possession in preference to other daughters, so if she leaves a son after being properly married, then that son would get all the properties in exclusion of all other daughters and daughters' sons. This was the view accepted in an old case, 'Radha Kissen vs. Rajnarayana' reported in the Civil and Criminal Reporter, page 152.

We can thus safely say now that Jīmūtavāhana expressly and distinctly lays down that during the life estates of the daughters the ownership vests in the daughters' sons. Now, if we can establish that during the life estate of the widow also the daughter's son happens to be the substantive owner, we shall have established fully the position contended for.

When does the ownership of the sonless maternal grand father's wealth accrue to the daughter's son? Let us face this question directly. Does it accrue after the extinction of all the intervening life estates? Take a concrete case. 'A' dies leaving his widow 'W', two daughters 'D' and 'D^2' under coverture and a daughter's son 'D.S.' by 'D'. According to the accepted opinion, 'A's properties will first go to 'W', who will hold a life estate over them, then they will pass to 'D' and 'D^2' jointly who will also hold a life estate over them with mutual survivorship, that is to say, one will hold a life estate

over the entire property at the death of the other. Then after the death of the last of these life estate holders, 'D²', for instance, the property passes absolutely to 'D.S'. Does the ownership of 'D.S' then arise at the death of 'D²'? Evidently no; for 'D.S' in that case is to be taken as the heir of 'D²', which he is certainly not, for he confers practically no spiritual benefit on D². There may be various other persons who will confer much greater benefit on her. Jīmūtavāhana himself says, "एवंच दुहितुरप्यधिकारे जाते तस्यां मृतायां तदभावोक्ताः पितृधनाधिकारिणः गृण्हीयुः।" (*Dāyabhāga*, 134) This means that on the analogy of the widow, when a daughter dies after having taken possession of the property of her father, such persons who were entitled to take possession of the property, had she not been in existence, will then take over possession (Dāyabhāga, 134). So according to Jīmūtavāhana D.S., after the death of D², only takes possession of the property of A. When does he become its owner? This Jīmūtavāhana has answered once for all in Section 139 which we have twice quoted above, viz., "तेनैव पिण्डदानेन दुहितुसुतोऽपि मातामहधने स्वामी।" "By the offering of that very 'Piṇḍa' (पिण्डः) the daughter's son becomes the owner of his maternal grand-father's wealth." The offering of this 'Piṇḍa' by the daughter's son becomes due as soon as the grand-father dies, even though the widow at the moment comes to the possession of the properties. So we must say that according to Jīmūtavāhana the ownership of the property of a man, who dies sonless, vests in his daughter's son even during the life estate of the widow.

One might object that inasmuch as Jīmūtavāhana himself has used in connection with the widow and the maiden daughter "स्वाम्यं" and "स्वत्वं", which do not mean possession but ownership, so how can it be said that during their respective tenure, the daughter's son gets a vested remainder? To this, our answer is that the daughter's son gets a vested remainder even during these two tenures; first because under very special circumstances, the widow or the maiden daughter becomes the owner of the properties, therefore Jīmūtavāhana has used in connection with them words which denote ownership. But these circumstances are very special and until and unless these special circumstances come in, properties must be said to remain vested in the daughter's son. It may however, be urged, that these circumstances, though unusual are still possible in theory and because of this theoretical, though remote, possibility of the daughters' son being cut off, it is wrong to call his interest a vested interest. This we answer by pointing out two circumstances *First*, it is in the power of the daughter's son or his representative to prevent these special circumstances from coming in. *Secondly*, according

to the special treatment of vesting and devesting of rights by Jīmūtavāhana, the happening of these special circumstances means the loss of the vested ownership of the daughter's son first, and then the accruing of the ownership to the widow or the maiden daughter, enabling her to deal with the property as she likes.

The widow, for example, can only deal with the property as she likes—can mortgage it, or dispose it of—if she is in difficulty of maintaining herself. "वर्त्तंणाशक्तौ आधानमप्यनुमतं तत्राप्यशक्तौ विक्रयमपि न्यायस्याविशेषत्वात् ।" (*Dāyabhāga*, 134) "If the widow is unable to maintain herself, mortgage is allowed, and if that, too, is insufficient, sale, too, is allowed on the same principle" (Dāyabhāga, 134). On this analogy, the maiden daughter, too, is entitled to mortgage or sell if she is in difficulty to procure a suitable husband in proper time. Now, the proper maintenance of the widow is absolutely necessary for the spiritual comfort of the soul of her departed husband ; for, if for want of proper maintenance she commits any misdeed, the soul of her husband would fall from heaven. "अकार्य्यं कुर्व्वंती पुण्यापुण्यफलसमत्वेन भर्तारमपि पातयतीति ।" (*Dāyabhāga*, 126), "Doing an impious act the widow makes the soul of her husband fall from heaven, for they share equally the effects of the piety or the impiety of either" (Dāyabhāga, 126). The maiden daughter, too, if unable to get a proper husband in time becomes the cause of the fall to hell of her fathers. "धनमन्तरेणा परिणीतायाः कन्याया रजोदर्शने पित्रादीनां नरकपातश्रुतेः ।" (*Dāyābhāga*, 136). "If for want of money an unmarried daughter cannot get married before she has menstruation, it becomes the cause of the fall to hell of her fathers." (Dāyabhāga, 136).

As soon as either of these two contingencies happen, the ownership vested in the daughter's son is lost. For, as we have seen above, it is solely on the postulate that the daughter's son becomes the cause of the spiritual comfort of the departed soul of his maternal grand-father, he becomes the owner of his property ; so if by his negligence or ignorance he allows such circumstances to exist or continue as bring the downfall of the departed soul of his maternal grand-father he loses his ownership at once. " उपकारकत्वादेव धनसम्बन्धः "—"The spiritual benefit is the only basis that establishes the relationship of predecessor and successor." So the daughter's son or his representative must see that the widow is properly maintained or the maiden daughter gets a suitable husband in proper time. If he does not, the ownership vested in the daughter's son is destroyed at once, and it accrues to the widow or the maiden daughter,

as the case might be, who thereby becomes the owner, entitled to deal with the property as she likes. In English Law, too, when the vested remaindership is destroyed for some reason or other, the intermediate beneficiary becomes the complete owner of the property, entitled to deal with it as he likes.

As Jīmūtavāhana uses the words "स्वाम्यं" and "स्वत्वं" which mean ownership, to denote the ownership of the widow and the maiden daughter respectively, under these special circumstances, it cannot in reason be said that the use of these two words affects in any way the remainder normally vested in the daughter's son. These special circumstances which mean the loss of the vested ownership of the daughter's son first and then the accruing of the same to the widow or the maiden daughter, are easily preventable by the daughter's son or his representative and ought to be prevented by him. If they are prevented, the vested remainder remains unaffected.

SOCIAL, ECONOMIC AND CULTURAL LIFE IN THE REPUBLICS OF ANCIENT INDIA

Rama Dhari Singh, M. A.

The scarcity of materials has always proved a great handicap for us in acquiring a fairly satisfactory knowledge of the manner in which common people in ancient times lived and thought. History in most cases is a record of the personal achievements as well as failures of the outstanding personalities and individual monarchs or dynasties without any reference to the general condition of the people, who really formed the real bulk of the nation. This is more true in the case of the republics of ancient India. However in this article the available pieces of information will be put together and with their help an attempt will be made to give an idea of their social, economic and cultural life. It is, beyond any doubt, true, that people, who had the honour of producing such personalities as Śri-Kṛiṣṇa, Mahāvīra, the Buddha and Chandragupta Maurya, maintained a high standard of social and cultural life. But, in most cases, our ancient literature and other available sources provide us with only the names of the republics ignoring the other essential details. Only a few of the republics have been favoured with a detailed description. The Andhaka-Vṛṣṇis, the Licchavis and the Śākyas may be included in this fortunate group. It appears rather essential to point out at the outset that most of the materials of this essay have been derived from the description of these republics.

Caste System

When the primitive Aryans entered India their structure of society was very simple and most probably they maintained no class distinctions among them. The society was parcelled out into divisions—tribes and clans and not in the four castes which we meet later on. Thus it appears that in the primitive stage of the gaṇas, the people had no class distinctions and the caste system had not been developed. The development of the caste system must have taken place in a later age and must have affected the republican states too. No doubt in most cases, the nobility or the aristocracy might have been formed of one class only—that of the Kṣattriyas—but the common people of the state consisted of all the classes. Pāṇini[1] furnishes us with definite evidence to prove this fact. He gives certain

[1] Pāṇini: Aṣṭādhyāyī, v. 3. 114.

rules which led to conclude whether the member of a particular republic belonged to Brāhmaṇa, Kshattriya or to any other caste. He takes the Mālavas for example and informs us that the member of the Mālavagaṇa, who belongs neither to a Kṣattriya nor to a Brāhmaṇa class will be called Mālavyah, and if he is Kṣattriya by caste he will be termed Mālavaḥ.[2] Some of these republican people have been termed as Vrātyas. The Kāśikā commentary explains the term 'Vrātya' as "Nānā-jātiyā aniyatavrittayaḥ utsedhajīvanasaṁghāvātāh."[3] The first qualifying term "nānā-jātiyā" apparently indicates that the people of these states did not consist of only one caste but of various castes.

Place in Society

The republican people were often looked down upon by the monarchists. Bhūriśravā, while reproaching Arjun calls the Yādavas not only wicked and perverted by nature but also 'Vrātyas.'[4] Similarly Manu designates the Licchavis and the Mallas as 'Vrātyas'.[5] But Manu did not forget to provide us with the real significance of the term Vrātya. He informs us that the Vrātyas were "those whom the twice-born beget on wives of equal castes, but who not fulfilling their sacred duties were excluded from the Sāvitrī."[6] Here we observe that the Vrātyas apparently were those Āryans, who did not perform the Brahmanical rituals. Thus they were only religiously fallen Āryans. Pandita Hara Prasāda Śāstrī gives an interesting interpretation of the term 'Vrātya', as used in the Atharvaveda. He tells us that, 'he is not as we commonly understand him, Sāvitrī patitah (सावित्रीपतितः), a fallen Āryan, but he is an Āryan outside the Vedic circle....He is the warrior and the keeper of the flocks.... They roamed about in hordes. They fought the Vedic Āryans. They are admitted to all the privileges of the Vedic society. They can study the Vedas, perform the sacrifices, entertain Brāhmaṇas with food cooked by themselves, see mantras and even compile the Brāhmaṇas. They were in fact the nomadic hordes of Aryans, but when they assumed a settled life, they were fully admitted into the Vedic society."[7] There is no doubt that most of the republican

[2] Kāśikā, pp. 455-56.

[3] Kāśikā, v. 3. 113.

[4] Mahābhārata. Droṇaparva, chap. 41, śloka 15.

[5] Manusmṛti, X. 22.

[6] Ibid., X. 20.

[7] J. A. S. B. Annual Address, New Series, vol. XVII. 1921, no. 2.

peoples possessed some of these characteristics. The anti-Brahmanic tendency is found in them from the very early times. A reference in the Atharvaveda indicates that the Vītahavyas, who were a thousand in number and were ruled by themselves, were overwhelmed, as they ate a Brāhmaṇa's cow.[8] The Andhaka-Vṛṣṇis possessed all the characteristics, described by Paṇḍita Śāstri. The republican peoples of the age of Lord Buddha observed Buddhism and Jainism as their state religions, and thus obviously were anti-Brāhmanic. The people of these republics neglected the duties and rituals prescribed by the Vedas and the Dharmaśāstras. Their political freedom, perhaps, led them towards their independence in the matter of religious and social customs. Hence they were not very particular about the ceremonies and practices that were required to be performed by the orthodox Brāhmaṇas. On these grounds the Brāhmaṇas, who were their religious antagonists were justified in calling them 'Vrātyas.' Perhaps this religious and social antagonism was the main cause of the negligence, abhorence and hostile views of the Brāhmana writers of Hindu polity towards their political life too.

MARRIAGE SYSTEM

The Hindu Śāstras have prescribed eight kinds of marriages[9] but most prevalent among them, not only among the republican people, but in the whole Hindu society was the Brāhmavivāha, in which the girl was handed over to a suitable bridegroom after decorating her with ornaments and dress provided by her father. When Śuddhodana, the president of the Śākyas decided to get his son Siddhārtha married each of the five hundred members of the assembly informed him that his own daughter was beautiful and fit for the prince.[10] But we get references which prove that sometimes the Rākshasa-marriage was also resorted to. Arjuna eloped with Subhadrā and the Yādavas ultimately sanctioned their marriage.[11] Similarly Kṛṣṇa carried away Rukmiṇī by force and married her.[12] But we do not get such references in other periods in the life of the republics of ancient India. It, therefore, may be concluded that this kind of marriage was prevalent only in the age of the Mahābhārata. When Bhīṣma demanded the

[8] Atharva Veda, 18. 10.

[9] Kautilya: Arthaśastra. III. 2.

[10] Lalitavistara (edited by Lefmann) p. 138.

[11] Mahābhārata, Ādiparva, chapters, 222-223.

[12] Harivaṁśa, Ch. LIV.

hand of Mādri for Pāndu, the Madra ruler said, "Matrimonial relation with your family is always desirable, but we have a family custom that we should give girls in marriage on taking a fee. I cannot ignore that custom."[13] This statement clearly indicates that among the Madras the custom of taking the bride-price was in vogue.

In some republics there is mention of such kind of marriage which can be likened to Svayaṁvara. The Lalitavistara[14] and the Mahāvastu[15] both state that Siddhārtha, after winning a tournament, was able to marry Yaśodharā. A Licchavi, who wanted a wife, asked the gaṇa to select a suitable bride for him.[16] But the general rule appears to be that the women, as soon as they were marriageable, were brought forward by their fathers and exposed in public to be selected by the victor in wrestling or boxing or running or by some one who excelled in any of the manly exercises. It also appears that they did not like to take or give dowries. It seems that widow-marriage was also in vogue among the Yādavas, as Kṛṣṇa married all the wives of Naraka, the king of Prāgjyotiṣa after his death.[17]

It appears that polygamy was common among the rich people, but ordinary people had to be satisfied with only one wife. Śri Kṛṣṇa is said to have married sixteen thousand wives and Ugrasena had one thousand.[18] But it seems, without any doubt, that these numbers have been greatly exaggerated. Perhaps according to the characteristic of the age the conquerors were allowed to choose as many wives as they desired from amongst the women of the conquered nation. Kṛṣṇa's father, Vasudeva had two wives and Kansa had married three sisters, the daughters of Jarāsandha the emperor of Magadha. But this custom was not confined only to the age of the Mahābhārata; in the time of the Buddha also we get references to the effct that polygamy was in vogue. The Śākyan president Śuddhodana had two wives, Māyā and Mahāmāyā according to the Pali books but according to the Lalitavistara he had a crowded harem of a thousand queens and Mahāmāyā was chief among them.[19] Polygamy appears to have been in vogue among

13 Mahābhārata, Ādiparva, chapter 113.

14 Lalitavistāra, p. 243.

15 Mahāvastu II, p. 48.

16 Vinaya Pitakam (Oldenberg), IV. p. 225.

17 Harivanśa, ch. LX.

18 Mahābhārata Ādiparva, ch. CCXX 19.

19 Lalitavistara, p. 28.

the Videha princes too, as is evidenced by a reference in a Jātaka,[20] where it has been mentioned that the king of Benares rejected the proposal of offering his daughter to a Videha prince in marriage because he possessed already a large number of wives. Though among the aristocracy polygamy was permissible yet monogamy was preferred and admired, it hence was the general rule. The Tibetan accounts inform us that the Śākyan law allowed only one wife to a man.[21] Siddhārtha, the Buddha, had only one wife.

Among the Licchavis and Śākyas, there was a peculiar custom of sister marriage, which was unknown anywhere else in the Hindu society. It was because of this custom that we find the Śākyas ridiculed by the Koliyas in the following words, "Be off with your people of Kapilavatthu, men, who like dogs, jackals and such like beasts, cohabited with their own sisters."[22] Perhaps it was due to the tradition of origin of the Śākyas, as given by the Sumaṅgala Vilāsinī, that the progenitors of the Śākyas married their own sisters.[23] In earlier times whatsoever might have been the case but in the time of the Buddha their marriage was confined within their clan only and they were even very proud of this. Not only the men, even the women held the same opinion. Many references go to prove this fact. Once Prasenajita of Kośala, who being their suzerain lord demanded one of their daughters in marriage. The Śākyas on receipt of this message gathered together and decided not to break the custom of their clan, and sent a daughter of a slave woman by a noble.[24] But this very deception brought their destruction at the hands of Biḍūdabha the son of the same slave-girl. After the destruction of the Śākya gaṇa Biḍūdabha wanted to bring the Śākyas to book by marrying five hundred Śākyan girls who had fallen in his hands. But these girls in their turns kept the reputation of the clan by courting torture and death rather than being married to a man of another clan.[25] When the assembly of the 500 Śākyas decided to get Siddhārtha married, they did not try to seek his mate from any of the neighbouring ruling families but from amongst themselves.[26] The Licchavis too, like the Śākyas, confined their marriages among

20 Jātaka, vol. IV. pp. 198-205.

21 Rockhill: Life of the Buddha, p. 15.

22 Jātaka, vol. v., p. 221.

23 Sumangala Vilāsini, Part I. p. 260.

24 Jātaka, vol. IV. pp. 91-92.

25 Beal's Record of the Western World, vol. II. pp. 11-12.

26 Lalitavistāra, pp. 186-187.

themselves. The Tibetan books inform us that "the people of Vaisālī had made a law that a daughter born in the first district could marry in the first district only and not in the second or third; that one born in the middle district could marry only in the first and second; but one born in the last district could marry in any of the three; moreover no marriage was to be contracted outside Vaisālī."[27]

When we observe the marriage customs of the Andhaka-Vṛṣṇi Saṁgha, we find a different tale there. While on the one hand they did not hesitate to marry their first cousins, on the other hand they go to the limit of marrying the black daughters of non-Āryans, whose colour affected their complexion. Perhaps Kṛṣaṇ's black colour was due to this. Subhadrā had married his own cousin Arjuna, the son of her aunt Kuntī. One of the queens of Kṛṣṇa was his own cousin. He had also married Jāmbavantī a non-Āryan girl.

Position of Women

A close study of the history of ancient India will show that at least in the aristocratic class of women purdah system was observed to some extent in ancient times. In the harem of Chandragupta Maurya no one was allowed to enter. But we find that in the republican nations of India, the women enjoyed more freedom. There was no purdah system at all among the Yadavas. In the festival at Raivataka mountain we find men and women mixing together without any restraint.[28] In the Rāsalīlā Śrīkṛṣṇa and other members of Vraja played freely with the Gopis.[29] The women of the Śākyas also enjoyed such independence and free thinking. They were the first to come out of their homes and to insist upon joining the order and becoming nuns in order to insure their emancipation. The Buddha, who had a great respect for the social order, had to yield to their insistence. The foster-mother of the Buddha took the lead and the Buddha had to establish a new order for the nuns.[30] Some of the Śākya ladies, who accepted the life of nuns have left behind them poems and songs that are preserved in the "Psalms of the Sisters." Tissā, Abhirupanandā, Therinuttā and Sundarī Nandā, were some of them, who attained Arhataship. Among the Licchavis we know Sihā, Jenti Vasitthī

27 Rockhill: Life of the Buddha, p. 62.

28 Mahābhārata, Ādiparva, CCXX.

29 Harivanśa, ch. LXXV.

30 Vinaya Text S. B. E. vol. XX. part III, pp. 320:326.

and Ambāpālī, who accepted the life of nuns and attained Arhatship.

Wine and Prostitution

Wine and prostitution was not unknown to the people of the republics. In the Mahābhāratā we find Kṛṣṇa freely drinking along with Arjuna, when they were wearied. Balarāma was a great drunkard. When Śrīkṛiṣṇa and Balarāma had visited the Gomanta mountain, Balarāma drank so much wine that "he grew inebriate and his body began to reel."[31] Similarly at several places we find him greatly drunk. Not only Kṛṣṇa and Balarāma were addicted to it but all the members of the Saṁgha relished it greatly. At the time of Rāsalīlā, described in the Harivanśa and the Bhāgavata Purāṇa all men and women were drunk. Their destruction has been attributed to excessive drinking of wine.[32] The Tibetan Dulva supplies us information that the Licchavis observed the rule by which the most beautiful woman was not allowed to marry but was reserved for the pleasures of the people and as Ambāpālī was such she was compelled to accept the life of a courtezan.[33] This statement obviously indicates that there must have been prostitutes among the Licchavis. The fact that Mahānāma, one of the leaders of the Śākyas had a daughter born of a slave woman, who was sent to Prasenajita in compliance with his demand, suggests that among the Śākyan aristocracy concubinage was ripe. As regards the Andhaka-Vṛṣṇis, we have many references that there were dancing girls, whom they utilized for sports and pleasures.[34] Thus we see that the people of ancient Indian republics were not free from the two great vices wine and prostitution.

Amusements

The citizens of the gaṇas maintained provisions also for amusements and recreation. The Andhaka-Vṛṣṇis are well-known for such propensities. They were a race of pleasure-loving and hardy people. Kṛṣṇa and Balarāma were two great athletes and Kansa had employed two wrestlers, Cāṇūra and Muṣṭhika. Sometimes tournaments were held in which these athletes took part. Such a tournament was held in Mathura when Śrīkṛṣṇa visited it, and in this tournament Cāṇūra

[31] Harivanśa, ch. XCVII śloka 11.

[32] Mahābhārata, Mauśalaparva.

[33] Rockhill: Life of the Buddha p. 64.

[34] Harivanśa, ch. CCXXV. ślokas 7-9.

Musthika and ultimately Kansa were killed by Śrīkrsna and Balarāma.[35] It appears that Mallas of Pāvā and Kushinārā were devoted to wrestling and it may be conjectured that the Mallayuddha has been named after the Malla people. Not only this but wrestling with elephants was also in vogue. In such a wrestling held in the court of Kansa Krsna killed the great elephant Cakrapīda.[36] Elephant training was also prevalent among the Licchavis.[37] The Licchavis had great relish for hunting. They often went to Mahāvana, armed with bows, ready with strings set and surrounded by a pack hounds in order to capture and kill some wild creatures.[38] Physical tournaments were not unknown to the Śākyas. For the marriage of Yaśodharā a tournament was held and Siddhārtha could win her hand after becoming victorious and standing first in the tournament.

The people also enjoyed feasts and festivals. There is a interesting description of the delightful festival held by the Andhaka-Vrisnis at the Raivataka mountain where men and women, rich and poor all mixed freely and enjoyed it and they also gave charity to the Brāhmanas.[39] Govardhanapūjā (worship of the Govardhana mountain exhibits their interest in nature). The Licchavis too did not lack in such enjoyments. They observed many festivals of which the most important was the Sabbarathvaro (Sivarātri). In the celebration of this festival songs were sung and musical instruments such as drums, trumphets etc. were utilized.[40] Similarly in the celebration of the festivals, all the members of the city Vaisāli took part and music and dancing were displayed.[41] Arrian informs us that the people of Oxydrakai took their processions with great pomp and show and their rulers marched in rich robes and 'Bacchic fashion' in time of war and other similar occasions, followed by attendants beating drums.[42] We have a reference in the Harivanśha which indicates that the Yādavas played dramas and thereby gave pleasure not only to the people of their own nation but also to the foreigners. It states that the

[35] Harivanśha, ch. LXXXIII.

[36] Ibid.

[37] Psalm of the Brothren. p. 106.

[38] Anguttara Nikāya. P. T. S. III. p. 76.

[39] Mahābhārata, Adiparva, ch. 220.

[40] Samyutta Nikāya, Vol. I. pp. 201-202.

[41] Psalms of the Brothren, p. 63.

[42] MacCrindle: Ancient India as described by Megasthenes & Arrian, p. 111.

Yādavas had gone to the city of Vajranābha, an Asura king as actors and they pleased the citizens of Supra with their dancing, acting and music. They gave a performance of the great epic Rāmāyana. The people of Vajra were so much delighted with the performance that they gave a lot as reward to actors with the result that the city became very poor. A vivid description of the sports and the ball-dance of the Yādavas has been given in the Harivanśa.

Manners and Customs

The Mahābhārata enumerates some of the good characteristics of the gaṇas in general, which were the cause of their prosperity. "In good gaṇas elders by knowledge encourage mutual subordination, behaving with complete straightforwardness (to one another); good gaṇas attain happiness all round. Good gaṇas prosper as they establish valid legal procedure according to the Śastras and they are fair to one another. Good gaṇas prosper because they discipline their sons and brothers and train them, and they accept only those, who have been well-trained."[43] Again it says, "Gaṇas prosper because they always pay due honour to their officers, who are wise, heroic, enthusiastic and perserving in discharging their duties. Wealthy, valorous, well-versed in Śastras and dextrous in the art of weapons helped the helpless across miseries and calamities."[44] Almost a similar account about the Licchavis is given by the Buddha himself. "So long as they honour and esteem and revere and support the Vajjian elders and hold it a point of duty to hearken to their words; so long as no woman or girl belonging to their clan is detained among them by force of abduction, so long may the Vajjians be expected not to decline but to prosper."[45] These statements suggest that the people of the gaṇas were required to listen to the words of their elders and to respect them. Discipline and training also were greatly stressed for the prosperity and existence of the republics. The advice of the elders was accepted by the republican Ambaṣṭhas (Ambastoi) for stopping the war against Alexander.[46] Women's chastity has also been stressed in the case of the Licchavis and the extract also suggests the moral strength of the people. Bhīṣma had full confidence in the character of the people of the republican nations, when he says that the

[43] Mahābhārata, Śāntiparva, ch. 107 16-18.

[44] Ibid, 20-21.

[45] Dialogue of the Buddha, II. p. 80.

[46] Diodoros, X. 102.

gaṇas could not be broken up by prowess and cleverness nor again by the temptation of beauty.[47]

Most of the republics had great regard for beauty and hospitality. When Arjuna visited the city of the Yādavas, in his honour they adorned the city and assembled together to welcome him. "In the public squares and thoroughfares thousands of women together with men immensely swelled the great crowd of the Bhojas, the Vrisṇis and the Andhakas that had collected there."[48] Similarly the republics of the age of Buddha welcomed him with pomp and show. Most part of his life was spent among the republican people. Once when he came to the city of the Licchavis they proceeded with their train to Vaisālī in their magnificent carriages and with their beautiful ornaments and clothes of different colours.[49] A similar description of the use of different colours among the Licchavis is given by the Anguttara Nikāya[50] and the Mahāvastu.[51] Once while the Buddha was being conducted to the Licchavis from Magadha a great rivalry took place between the Licchavis and Bimbisāra, the king of Magadha in matter of decoration of roads. Although the efforts of Licchavis were greatly handicapped by the prevalence of pestilence among them, yet their pomp and show and reception was far superior in excellence and beauty to that of Bimbisāra who was in possession of greater resources and power.[52] Strabo informs us that the most beautiful person among the Ambaṣṭhas was elected as the president of the state.[53] He further informs us that the children were brought up in strict discipline under the state supervision. Two months after the birth of a child it was examined by the state officials in order to see whether the boy was physically fit for living in the state. They were thought to be the property of the state.[54] A similar social order was maintained by the Saubhūtis.[55] Sons were very obedient to their father among the republic of the Kaṭhas and they never fringed from offering their lives in compliance with

[47] Mahābhāratā, Śāntiparva, ch. 107. śloka 31.

[48] Ibid. Ādiparva, ch. 220 śloka 18.

[49] Buddhist Sūttas, S. B. E. XI. p. 31.

[50] Anguttara Nikāya, P. T. S. III, p. 239.

[51] Mahāvastu vol. I. p. 259.

[52] Senart: Mahāvastu, vol. I pp. 253-ff.

[53] Strabo, XV. 3.

[54] Disdoros, XCI.

[55] Dr. Jayaswal: Hindu Polity, 82.

the order of their parents. Perhaps the Nachiketopākhyāna in the Kaṭhopanishad has been created only to display this spirit of the Kaṭhas.

DRESS

All kind of dresses of cotton, wool, silk and linen were utilized by the people of republics. Nearchos tells us that the people of India wore an under garment, which reached below the knee, and also an upper garment which they threw partly over their shoulders and partly twisted in folds round their heads. The rich people among the Indians wore rings of ivory. He further says that 'they wore shoes made of white leather and these were elaborately trimmed while the soles were variegated and made of great thickness to make the wearers seem so much taller.'[56] The Harivanśa informs us that Śrīkṛṣṇa clad himself in a raiment of shining yellow colours; he also adorned his arms with ornaments and dedecked himself with garland of wild flowers.[57] But that Arjuna sent Subhadrā to Kuntī and Draupadī into the inner apartment dressed not as queen but in a simple garb of a cowherd woman,[58] obviously suggests that the women of the Yādavas had a unique dress, which was quite different from that of other Aryans. It has referred to before that the Licchavis put on dresses dyed in various colours. Senart suggests that perhaps they were divided in many groups, distinguished by the colour worn by each group.[59] According to the Greek historians the Śivis used skins in the place of cloth.[60] The hundred ambassadors who were sent by the Sudrakai and Malloi to conclude a treaty with Alexander wore a robe of linen which were embroidered with unwrought gold and purple.[61]

PROFESSIONS

The people of the republics were, it seems, economically happy. Kauṭilya calls some of them Vārtāśastropajīvī (वार्ताशास्त्रोपजीवी)[62] which suggests that they were not only brave

56 MacCrindle: Ancient India as described by Megasthenes and Arrian, pp. 219-220.

57 Harivanśa, LXXV 20-21.

58 Mahābhārata, Adiparva, ch. 223.

59 Senart: Mahāvastu, p. 574, footnote.

60 MacCrindle., I. I. A. p. 112.

61 Ibid. p. 248.

62 Kauṭilya: Arthaśastrā, XI. 1.

in battles, but also economically sound as they managed efficiently agriculture and industry. According to Kauṭilya the term Vārtā includes at the sametime agriculture rearing of the herds and flocks and trade.[63] There is no doubt that the main profession of the people was agriculture. Without agriculture they could not have lived happily in an agricultural country like India. The Kṣundrakas and the Mālavas were working in the fields when Alexander invaded them.[64] They also reared herds of cows. The Yādavas are well renowned for this profession. Even Kriṣṇa and Balarāma have been described in the Harivanśha and the Bhāgavata Purāṇa'as driving their cattle in the forests. They produced milk, butter, curd, and ghee in abundance. This abundance of healthy and nourishing food developed their physique.

INDUSTRY

The third profession of the people must have been industry. We have seen that people put on dresses made of cotton, wool and silk. There must have been living in these gaṇas the weavers and the people must have been producing threads by means of Charkha. We have references to many ornaments which indicate the existence of goldsmiths. The mention of chariots and weapons of various kinds such as sword, spear, bow and arrow presupposes the existence of ironsmiths and carpenters in the republics. The Licchavis wore dresses of different colours which suggests that there were expert dyers. The Chullavagga informs us that a poor tailor of Vaisālī had an intention to build a house for the use of the Saṁgha.[65]

ARCHITECTURE

In the gaṇas of the time of the Buddha we get references to many magnificent new and old buildings. Many vihāras, chaityas and shrines were built by the people of these republics. There must have been masons and artisans to build them. The Lalitavistara describes the magnificent palaces of Vaisālī, which shows that the art of architecture was much developed among the Licchavis.[66] A passage in the Chullavagga informs us that some of the Bhikkhus themselves were great architects and master-builders, who supervised the erection of the

[63] Ibid. I. 3.

[64] MacCrindle. I. I. A. p. 141.

[65] S. B. E. XX. p. 190.

[66] Lalitavistara (Bibliotheca Indica. Series) ch. III. p. 23.

buildings.[67] According to the Sumaṅgala Vilāsinī, there was a technical college of the Śākyas, which was a long terraced mansion erected for the education of crafts.[68] It was essential for every Śakya young man to learn at least one of the crafts, if he wanted to marry at all, for no father would offer his daughter in marriage to a person, who did not know one of the crafts. Even against Siddhārtha such objection was raised by the father of Gopā. He said, "The honourable prince has been reared at home. This, however, is our family custom, that a girl is to be made over to one proficient in the arts (Śilpas) and not to one ignorant of them. The prince has no knowledge of the Śilpas nor is he acquainted with the methods of fighting with the sword, the bow or other weapons. How can I then make over the girl to the prince ?"[69] We get almost a similar account in the Mahāvastu.[70] The Śākyas also maintained at Kapilavastu a school for archery.[71]

TRADE AND COMMERCE

The republican people of ancient India were not lagging behind in trade and commerce. From the Vaisālī ruins, as many as 700 clay seals, belonging to the bankers and merchants, have been discovered,[27] which indicate their busy economic life. From the early times Videha was the centre of trade and commerce and it was often visited by merchants. There are references that in the time of the Buddha merchants often came to Videha from Srāvasthī to sell their articles and to purchase new things.[73]

CITIES AND TOWNS

There were a number of beautiful cities and towns in the republics. In the Epic age Mathurā and Dwārikā were prosperous cities. In the Buddhist age we come across various cities which were renowned for their wealth and prosperity. The Mahāvagga gives the description of Vaisālī in the following words. "(It) was an opulent prosperous town populous crowded

[67] Chullavagga, S. B. E. XX. p. 190.

[68] Diologue of the Buddha, vol. IV, part III, p. 111, footnote.

[69] Lalitavistara, p. 243.

[70] Mahāvastu, II. 48.

[71] Watter's Yuan Chwang, vol. II. p. 13.

[72] Rangāchārya : Vedic India, p. 437.

[73] Dhammapala's Paramatthadipani on the Theragāthā, III, pp. 277-278.

with people abundant with food; there were 7707 storeyed buildings and 7707 pinnacled buildings and 7707 pleasure grounds and 7707 lotus ponds."[74] A similar account has been given in Lalitavistara. "This great city of Vaisāli was prosperous and proud, happy and rich with abundant food, charming and delightful, crowded with many and various people, adorned with building of every description with storeyed buildings, with towns and places with noble gateways and charming with beds of flowers in her numerous gardens and groves."[75] Similarly in the time of the Buddha Mithilā was a carefully planned extensive city with four market towns and four gates, traversed by streets on all sides and abounding in horses, cows, chariots, tanks and gardens. "The gallant knights with their robes of tiger skins, the rich Brahmans wearing the robes of Kashi and perfumed with sandal and adorned with gems. Beautiful queens and busy traders display a versatile distinction."[76] The Śākyas had many towns besides Kapilvastu and Mallas too had numerous cities besides their capitals Pāwā and Kuśinārā. The Greek accounts state that Alexander had to go through a large number of towns, which came in his way. The existence of so many towns and great cities in the republics of ancient India bear witness to the prosperous economic condition of the people and their developed trade and commerce.

Currency

The coins of the Arjunāyanas, Audumbaras Kunindas, Mālavas, Nāgas, Rājanya Vṛiṣnis and the Yaudheyas have been discovered at various places. There is no gold coin; some of them are of silver and the rest are of copper. These coins belong to the 3rd century B.C.[77] Regular impressions have been cast on these coins with a single die and different punches.[78] As all the symbols, on these coins are similar to those of the Kārṣapaṇas no reasonable doubt can be entertained about the fact that these coins belonging to the gaṇas are only the developed form of the Kārṣapaṇas, the indigenous coins of ancient India.[79] The Mālavas utilized perhaps all the sub-divisions of the copper Kārṣapaṇas, the smallest being

74 Mahāvagga, Vinaya Text II (S. B. E.) p. 171.

75 Lalitavistara, ch. III. p. 21.

76 Vedic India, p. 420.

77 Smith: Catalogue of Coins in Indian Museum, p. 166-183.

78 Bhandarkar: Lectures on Ancient Indian Numismatics, p. 5.

79 Ibid.

1.7 grains in weight.[80] "The small size of these coins is a peculiarity of the coinage of the Mālavas, and this particular coin may claim the honour of being one of the smallest coins of the world."[81] On the ground of the statement of Curtius, the Greek historian, that Alexander received a present of hundred talents of white iron (ferri candidi) from the Oxydrakai (Kśudrakas) and the Malloi (Mālavas). Cunningham opines that these people used the coins of nickle.[82] Prof. Bhandarkar also holds a similar opinion on the ground that the "white iron" might refer to tin or nickle, but tin is too soft to be used as coins and moreover it was known to the Greeks.[83] In the coins both the scripts—Brāhmi and Kharoṣṭhi have been used, in some the former and in some the latter. Most of these coins have been issued in the name of the republics and some in the names of their leaders. The metal and the size of the coins issued by the republics obviously indicate that economically they were not very rich. The find-spots too suggest that they maintained very little intercourse with the outside world. Here we should note that the coins that are available belong to the period when the republics were in process of decline because of the Mauryan supremacy and foreign invasions. Therefore the conclusion based on the nature of the coins is not likely to hold good regarding the prosperous days of these republics.

EDUCATION

The young Hindu students were expected in their early years to learn the Vedas and other sacred literature of Hindus by heart. They were placed under some teacher at the early age of 8, 10 or 12 and remained there for 12 years or more. They remained in the teachers house doing menial service under him and begging alms for him. Tradition informs us that Śrīkṛṣṇa was placed under Sāndīpana, his teacher and remained in his house for a long time. There he was treated on an equal basis with the poor students like Sudāmā and he often went to fetch fuel from the forest for his preceptor and also performed other menial services. The republican people of the age of the Buddha were not lagging behind in education. We have references wherein it is mentioned that many of the princes of republics went to Taxila in order to receive education in arts and literature. The Dhammapada informs us that a Licchavi

[80] Prof. Chakravarti: Ancient Indian Numismatics, p. 61.

[81] Smith, C. C. I. M., p. 193.

[82] Prof. Chakravarty, A. I. N., p. 74.

[83] Bhandarkar: Lectures on the Indian Numismatics, p. 144.

prince named Mahāli went to Taxila, learnt art there and after returning opened a school of art in Vaisālī and trained 500 of the Licchavis.[84] These people also took up the same task and educated many of Licchavis by opening schools of their own. Thus education spread far and wide among the Licchavis and the percentage of the literate men must have been high. Videhan and Malla princes also received education at Taxila. We get information from one of the Jātaka stories that a Videha prince was sent to Taxila in order to accomplish himself in learning.[85] Similarly we are told in one of the Buddhist texts that Buddha, a son of the Mallan king of Kuśīnagara went to Taxila for education. There he sat along with Prasendi of Kośala and Mahāli, a Licchavi prince Vaisāli, at the feet of a great teacher. After completing his education he came to his realm.[86] We have observed before that the Śākyas maintained a technical college in which crafts were taught and also a school for the education of archery at Kapilavastu. The Lalitavistara informs us that the Buddha in his boyhood was taught various sciences, arts and crafts beginning from the alphabets. But the book being written in much later time, its information cannot be completely reliable. But it is certain that the nation which produced great personalities like Śrīkṛṣṇa, the Buddha, Mahābira and Chandragupta Maurya could not be backward in education and deficient in acquiring the accumulated knowledge of the past. The teachings of Śrīkṛṣṇa the Buddha and Mahābira obviously testify to the fact that they must have reached that stage after an intelligent and critical study of the ancient Indian religious literature and philosophy.

PHILOSOPHICAL SPECULATION

Kaṭha Philosophy

The contribution of the republics to the Indian philosophy is unique. To begin with we should turn to the great Upanishadic philosophy and the Vedic learning of the Kaṭhas of the Punjab. The Kaṭha school of philosophy formed one of the most important schools of the 'White Yayurveda. The Kaṭhaka Saṁhitā which is still held in high esteem is a monument of their learning. The grammarian Patañjali informs us that the Kaṭha school was universally known and its doctrines were proclaimed in every village.[87] From the Rāmāyana also we learn that this

[84] Tansholl: Dhammapada, p. 211.

[85] Jātaka (Cowell), II p. 27.

[86] Dhammapada, p. 211.

[87] Patañjali: Mahābhāṣya, IV. 3. 101.

school was highly honoured in Ayodhyā.[88] Some portion of the Taittirīya Brāhmaṇa and Taittiriya Āraṇyaka originally belonged to the school of the Kaṭhas. The Kaṭhopaniṣad which deals with the problem of the life after death in the form of a legend is counted as one of the most important Upaniṣads, whereas the Kaṭhaka Gṛhya Sūtra is said to be the basis of the well-known law book named Viṣṇu Smṛti. Thus the remarkable contributions of the Kaṭhas cannot be ignored and these have immortalized their name.

Kṣhudraka Philosophers

The Greek accounts state that the Kṣudras were great philosophers. We have been informed by Philastratus, in his book the 'Life of Appolomus of Tyana' that Alexander had a great number of philosophers and these belonged to the nation of the Oxydrakai (Kṣudrakas). He further informs us that in the time of Appolomus (about 40 B.C.) these Kṣudrakas were regarded as "rather dabblers in philosophy than philosopher."[89] These pieces of information give us a clear testimony to the fact that among the Kṣudrakas there were great philosophers, who were highly admired by the Greek writers.

Vṛṣṇi Philosophy

The contribution of the Vriṣnis is not less in importance. They have the proud privilege of giving Lord Kṛṣṇa, one of the greatest philosophers of the world to our motherland. It was he who saved the Indian society, its culture and religion by putting forth his monumental preachings in the form of the sacred Bhagavad Gitā. The philosophy of Śrīkṛṣṇa and his cousin Nemi is the back-ground of the whole national faith of the present India. Thus the unique contribution of the Vṛṣṇis in Śrīkṛṣṇa and his sacred Gitā enables them to rank as one of the greatest contributors to the illustrious history of Hindu India. As regards popularity the Gitā occupies the first position among the books in the world of Indian thought, and it has always had a great popularity which is increasing day by day. Its value has not decreased through the lapse of time and this is a mark of its real greatness.

Similarly the Licchavis and the Śākyas have made great contributions not only to the philosophy of India but to the philosophy of the world. Two of the greatest religions of the world, i.e., Buddhism and Jainism were started by their scions,

[88] Macdonell: History of Samskrit Literature, p. 176.

[89] Dr. Jayaswal: Hindu Polity, 88.

the Buddha and Mahābīra respectively. The Licchavis claim Mahābira the founder of Jainism as their own citizen. He is spoken of in the Jain canonical works as Vaisālika i.e. a native of Vaisāli.[90] Kundanagrāma, where Mahābīra was born was in the suburb of Vaisālī and his mother Triśalā was the sister of Cetaka, one of the nobles of the Licchavi gaṇa.[91] The Jṇātrika gaṇa, to which Mahābīra belonged formed a part of the great Vajji confederacy.[92] Jainism is the only heretical creed, which has survived to the present day in India out of many that were preached in opposition to the Vedic teachings. It may be called an extreme path in which the kindness to the creature is carried to an unpractical stage. A vast amount of philosophical literature has been composed in Jainism.

Jainism

Lord Buddha, the originator of Buddhism, one of the greatest religions of the world, was a scion of the Śākya gaṇa. "He is one of the greatest figures in the spiritual history of mankind, and his life is one of the most inspiring in its lessons to humanity."[93] Buddhism spread widely, and in course of time, became the world religion, and even to-day a great bulk of humanity is within the fold of this religion. Its followers are still found even in the remotest part of the world. Here I cannot resist the temptation of quoting the glowing tribute paid to Buddhism by Dr. Sir Radhakrishnan, the greatest exponent of Indian philosophy of the present age. "There is no question that the system of early Buddhism is one of the most original, which the history of philosophy presents. In its fundamental ideas and essential spirit it approximates remarkably to the advanced scientific thought of the 19th century. The pessimistic philosophy of Germany—that Schopenhauer and Hartmann is only a revised version of ancient Buddhism. It is sometimes said to be like more than Buddhism vulgarized. As far as the dynmic conception of reality is concerned, Buddhism is splendid prophecy of the creative evolution of Bergson. Early Buddhism suggests an outline of philosophy suited to the practical wants of the present day and helpful in reconciling the conflict between faith and science."[94]

Buddhism

[90] Jacobi : Jaina Sutras, Pt. I. Introduction p. 11.

[91] Ibid (S. B. E. XXII) Pt. X-XII.

[92] Rai Chaudhari : Political History of Ancient India, p.

[93] Hiriyanna : Outlines of Indian Philosophy, p. 134.

[94] Radhakrishnan : Indian Philosophy, I, p. 342.

It will not be out of place if we trace the influence of Buddhism on Christianity. As Buddhism is anterior to Christianity it may be possible that the Christianity was influenced by Buddhism, as there is great similarity between the two. It has been accepted by scholars that in the neighbourhood of the place Jerusalem where Christ was born, there lived some certain religious sects, which were influenced by Buddhism. The sect of the Essenes and the Therapeutae were the most important among them. As these sects flourished before Christ in the neighbourhood of his birth-place, we can obviously presume that possibly Christianity also was influenced by Buddhism. If it was so, the place of the Buddha will rise much higher. Thus we see that the greatest contribution which India gave to the world in the field of religion and philosophy was given by the Śākyas, one of the republics of ancient India.

THE SOCIAL BACKGROUND OF THE RESTORATION COMEDY OF MANNERS

Ram Awadh Dwivedi, M.A.

The return of Charles II in 1660 meant a complete triumph of monarchy in England. Circumstances had so shaped themselves that the entire nation unhesitatingly offered a sincere welcome to the son of their 'late executed royalty.' The landing of Charles at Dover was marked with unprecedented rejoicing and expression of loyalty. "When he landed, the cliffs of Dover were covered by thousands of gazers, among whom scarcely one could be found who was not weeping with delight."[1] Pepys while describing the event writes: "Infinite the crowd of people and the gallantry of the horsemen, citizens, and noblemen of all sorts. The shouting and joy expressed by all is past imagination."[2] People who were sick of Puritan oppression and had suffered much from misgovernment during the last several years naturally saw in the restoration of monarchy the wholesome prospect of a stable and mild governance. The Cavaliers and Roundheads were alike in dread of being governed by Monk or Lambert and the military forces and to save themselves from the rule of 'cuirassiers and pikemen' willingly offered themselves to be ruled by the rightful heir of their late king. With the return of Charles, the Episcopalions once again found themselves possessed of power and prominence. The old union of Bishop and King was once again evoked and revived. The Bishops extolled the power of the king and the king acted as the supreme arbiter in the quarrels between the Anglicans and the Presbyters. Thus the Crown of England was offered to Charles II without any reservations and circumstances secular and religious only tended to make his position firm. At no other time in the history of modern England kingship was so popular as at the time of the restoration of Charles, the Second.

Naturally the restored king was the cynosure of the nation—the observed of all observers. Not only did he command the loyalty of his people but he also influenced their lives in an unprecedented measure. King Charles had great personal attractiveness and magnetism. The following contemporary

[1] Macaulay, *History of England*, Vol. 1, page 155.

[2] Samuel Pepys, *Diary*, 25th May, 1660. (Everyman)

account bears ample testimony to the fact. One who knew the king well has described him :—

> "He is somewhat taller than the middle stature of Englishmen, so exactly formed that the most curious eye cannot find any error in his shape. His face is rather grave than severe, which is very much softened whensoever he speaks ; his complexion is somewhat dark, but much enlightened by his eyes, which are quick and sparkling. Until he was near twenty years of age, the figure of his face was very lovely, but he is since grown leaner ; and now the majesty of his countenance supplies the lines of beauty. His hair which he hath in great plenty is of a shining black, not frizzled, but so naturally curling into great rings that it is a very comely ornament. His motions are so easy and graceful that they do very much recommend his person when he either walks, dances, plays at pall mall, at tennis, or rides the great horse, which are his usual exercises. To the gracefulness of his deportment may be joined his easiness of access, his patience in attention, and the gentleness both in the time and style of his speech ; so that those whom either the veneration for his dignity or the majesty of his presence have put into an awful respect feel reassured as soon as he enters into a conversation."[3]

Personal attractiveness was matched with varied accomplishment. He had understanding and was well-versed atleast in three foreign languages—French, Italian, and Spanish. He had studied mathematics and was specially interested in the art of reading character from the face. He had acquired ample proficiency in the art. He was a pleasant talker, had pleasing social manners, and had some taste for art.

King Charles was endowed with natural gift and had undergone long apprenticeship in the school of suffering. Yet these had not sufficed to make him either sober or earnest. No sooner did he ascend the throne than he made it clear by his conduct that he was bent on living a life of pleasure and ease. Writing within two months of the king's landing at Dover, Pepys says : "Late writing letters ; and great doings

[3] Sir Samuel TUKE, *A Character of Charles II* (1660) ; see also Bishop BURNET'S account of the king.

of musique at the next house, which was Whally's, the king and Duke there with Madame Palmer, a pretty woman that they had a fancy to, to make her husband a cuckold."[4] This amour begun early in his reign, exercised great influence on the king till 1772, and the charming Mrs. Palmer steadily rose in importance, becoming Countess of Castlemaine, and subsequently the Duchess of Cleveland. Besides this lady who makes the most distinguished figure in the annals of infamy there were many other women who at one time or other attracted the sensuous heart of Charles II. Miss Stewart, for instance, for a time inflamed the passions of the king so powerfully that she bade fair to be a formidable rival of the Countess of Castlemaine. Lucy Walters was an earlier mistress. Everyone was aware of the king's intrigues with Nell Gwynn, a player and a courtezan. It is difficult to exhaust the list of women who were the recipients of the king's amorous attention. "Mistress followed mistress and the guilt of a troop of profligate women was blazoned to the world by the gift of titles and estates."[5] But Charles was far from being content with his mistresses or with a single form of self-indulgence. He was an inveterate pleasure-seeker. "He might well have endorsed the avowal of Bunyan's Mr. Lustings. 'I was ever of opinion that the happiest life a man could live on earth was to keep himself free from nothing that he desired........and I have never been false at any time to this opinion of mine."[6] Gambling and hunting provided pleasing diversions to him when he could no longer toy with his favourites or bet at New Market. He paid frequent visits to the play-houses, attended musical parties, and took special delight in dances because they helped to feed the flame of his passions.

By nature and temperament Charles II was averse to taking business earnestly and his life of dissipation tended to accentuate this ease-loving propensity. He made no secret of his hatred for business. When Thomas Killigrew told him that things were getting worse and could be set right only by the king, Charles laughed without paying any serious heed to the valuable advice. "He was utterly without ambition. He detested business, and would sooner have abdicated his crown than have undergone the trouble of really directing the administration."[7] Taine has described how the Merry Monarch

[4] Pepys, *Diary*, July 13, 1660.

[5] J. R. Green, *History of the English People*, Vol. VI, page 125, (1896).

[6] David Agg, *England in the Reign of Charles II*, (1934), page 149.

[7] Macaulay, *History of England*, Vol. 1, page 111.

was busy chasing a moth while the Dutch warships were sailing up the Thames and terrified Londoners could hear the boom of guns. He was almost totally ignorant of the affairs of the State as he did not like unwelcome truths and worries of business to disturb him while he lived in the pleasure-land of his own seraglio. His facility was so complete that he could not take a firm stand even when he was convinced of the correctness of his opinions. On the most important points he could easily yield because he was lacking in the persistence which makes a man stick to what he trusts to be right and true. King Charles II combined comfort with kingship at a time when the principle of ministerial responsibility was yet unknown. He hated the monotony of drudgery and toil because his heart was set always on new joys. He loved novelty and did not stand on conventional dignity. Encouraged by his unceremoniousness people could sometimes venture to be impudent, but he was forgiving and kind.[8] He had confidants among his courtiers to whom he could impart his most intimate secrets. The accounts of Chevalier Grammount and Pepys leave no doubt that the king was accessible without much difficulty and met people on terms of equality.

The king's preference for pleasure and ease had a far reaching effect. The entire community seems to have been infected with inordinate lust for baser joys of life. The king set the standard which his subjects willingly tried to live upto. "With the restoration of the king, a spirit of extravagant joy spread over the nation, that brought on with it the throwing off the very professions of virtue and piety. All ended in entertainments and drunkenness which overrun the three kingdoms to such a degree, that it very much corrupted all their morals"[9] Thomas Hobbes had recently maintained that the will of the king was the only standard of right and wrong and this significant change in the ethical standard only helped to relax the obligations of conventional morality. Then there was the strong reaction against the forced morality of the Common Wealth period. In their zeal for making society and the life of the individual pure and unobjectionable the Puritans had adopted extreme measures and had gone to ridiculous extents. With the Restoration people found themselves free to live as they liked and more often than not gave themselves up to gayer and softer vices. Besides, the seventeenth century scepticism

[8] Samuel PEPYS, *Diary*, April 16, 1667.

[9] Bishop BURNET *History of his Own Times* Vol. 1, page, 127 ; see also *Memoirs of Chevalier Grammont*, page 110.

and love of experimentation made themselves felt in the realm of morals and traditional notions of right and wrong were thrown to the winds. The spirit of Hobbes and Descartes made people bold to walk on new and untrodden paths. The Church could have worked as a check against the prevalent vices, but her whole soul was in the crushing of Puritans. "Thus the clergy, for a time, made war on schism with so much vigour that they had little leisure to make war on vice".[10]

But though the manners and morals of the whole nation were affected by the forces liberated at the time of the restoration of monarchy in 1660, the new tendencies can be particularly noticed in relation to the court and the social circles of which it was the centre. People of the court came directly in contact with the king, and being ambitious of promotion and solicitous of royal favour, naturally tried to emulate vices of their patron. Their easy means made them free from worries and allowed them to live a life of ease and extravagance. Many of those who now enjoyed the confidence and company of the king had lived with him in France in his exile and had learnt to judge of actions and behaviour according to moral standards much less stringent than those that the English people had so far been familiar with. The court of Charles II thus became a centre of violent and often coarse voluptuousness. What we regard serious and legitimate concerns of life appealed as little to the thoughts of the people as they were distasteful to the fancy of the king. As John Palmer emphatically states the 'noble laziness of the mind' which was so characteristic of Charles II also determined the quality and temper of Restoration society.[11] The courtiers and those who moved in social circles round the court were fine gentlemen who shunned business and had dedicated themselves entirely to pursuits of pleasure. They cared much less for the virtues of the heart than for acquired social accomplishments. It mattered not to them that their conduct judged according to established ethical standards, was despicable, but they were very much concerned about the proper polishing of their boots, the powdering of their wigs, and the pleasing bend of their heads while talking to ladies of fashion. The ladies enjoyed perfect freedom and equality and exhibited much wit and cleverness. The behaviour and moral conduct of ladies belonging to the court circles was as unconventional as that of men, if not more, and they were as much given to frivolity and excess as their male counterparts.

[10] MACAULAY, *History of England* Part I, page 188.

[11] John PALMER, *The Comedy of Manners*, page 36.

The thing that comes foremost to our minds when we think of the court of Charles II is the plethora of its love intrigues. In this as in every other form of pleasure-seeking, the king himself lead the way. The social records of the times are full of the accounts of the numerous mistresses of King Charles and his absorbing interest in them. Of these Lady Castlemaine was undoubtedly the woman of the most fascinating charms. Pepys is never tired of praising her personal beauty and is so much attracted by her that very often he calls her 'my' or 'my dear' Lady Castlemaine. Soon after the Restoration, the king bestowed his easy affections on her. She was then the wife of Roger Palmer, Esq, who after sometime was created Earl of Castlemaine. His wife now became an avowed mistress of the king. In 1662 the wife and the husband fell out over the christening of their second child and consequently ' she left her Lord, carrying away everything in the house ; so much as every dish, and cloth, and servant, but the porter''.[12] The outraged and disconsolate husband went into France to enter a monastery. The influence of Lady Castlemaine persisted and she was eventually made the Duchess of Cleveland. This honour was conferred on her to appease her after a quarrel between her and her royal paramour.[13] The infatuation of the king for her was unlimited. He did not forego his visits to her apartments even when he appeared to be much concerned over the serious illness of the queen in 1663.[14] Pepys writes on January 1st, 1663 "Among other discourse, Mrs. Sarah tells us how the king sups at least four times every week with my Lady Castlemaine ; and most often stays till the morning with her, and goes home through the garden all alone privately, and that so as the very sentrys take notice of it and speak of it." The king lavished riches and dignity on her, yet he did not succeed in securing the affections of this inconstant lady entirely to himself. Fully aware of the mild and forgiving nature of the king, she bestowed her bewitching favours on a number of gallants. She was enamoured of Jermyn,[15] Churchill,[16] Wycherley[17] and even Jacob Hall the rope-dancer.[18] The most formidable rival of the Countess of Castlemanie was Miss Stewart. By her extraordinary

[12] PEPYS, *Diary*, August 26, 1662,

[13] *Memoirs of Chevalier Grammont*, page, 285.

[14] PEPYS, *Diary*, Oct. 20, 1663.

[15] *Memoirs of Chavolier Gramnont*, page, 121.

[16] *Ibid*, page 351

[17] Leigh HUNT's edition of Restoration Comedy, Introductson page XI.

[18] GRAMNONT'S *Memoirs*, page, 186.

beauty and rare attractiveness she made a deep impression on the inflammable fancy of King Charles, so that he was desperately in love with her. He was seen kissing her in odd corners[19] and it became a common discourse, that there was a design on foot to get him divorced from the queen, in order to marry this lady. Through the jealous machinations of Lady Castlemaine, the king one night found the Duke of Richmond paying her a visit, soon after she had put him off on the pretext of sickness. Miss Stewart was sore upset, but she ended by marrying the Duke secretly. Another lady who exercised powerful influence on King Charles was the Duchess of Portsmouth. The Duchess was a French woman Louise Renee de Penencovet de Qu'erouallo by name. Evelyn refers to her as 'that famous beauty, the new French maid of honour'[20] At a time when Charles was reduced to the basest expedients for lack of money, the Duchess of Portsmouth's apartment at Whitehall was 'luxuriously furnished, and with ten times the richness and glory of the Queen's'.[21] This lady had a great hand in bringing the king more and more under the French influence. Besides these there were Miss Wells, Nell Gwynn, and many others who at one time or other had struck the king with passion. Charles II took very seriously to his love intrigues. He had his confidants and friends whom, as we have already said, he treated more or less on terms of equality. He did not stand on dignity and did not always expect deference from his courtiers. Mr. Edward Montague at one time became a favourite of the queen, 'in so much that the Lords about the king, when he would be jesting with them about their wives, would tell the king that he must have a care of his wife too, for she hath now the gallant, and they say the king himself did once ask Montague how his mistress, meaning the Queen, did."[22]

James, Duke of York equalled if not actually surpassed his royal brother in erotic propensities. He courted and secretly married Anne Hyde[23] before the king's restoration. Lady Denham, Miss Hamilton, Arabela Churchill, Miss Sedley, Lady Bellasys, Miss Jenning, Countess of Chesterfield were only some of the ladies who were the objects of his love. He was 'the most unguarded ogler of his time' and pursued his love affairs with a zest. Among the court gallants, mention must first be made

19 Pepys, *Diary*, November 9, 1664.

20 Evelyn, *Diary*, November, 1670.

21 Pepys, May 20, 1664.

22 *Memoirs of Grammont*, page 114; also Pepys, October 25 and 27, 1660.

of John Wilmot, Earle of Rochester. Taine has summed up the man in the following words :—

"His manners were those of a lawess and wretched mountebank ; his delight was to haunt the stews, to debauch women, to write filthy songs and lewd pamphlets ; he spent his time between scandal with the maids of honour, broils with men of letters, the receiving of insults, the giving of blows. By way of playing the gallant, he eloped with his wife before he married her. To make a display of scepticism, he ended by declining a duel, and gained the name of a coward. For five years together he was said to be drunk. The spirit within him failing of a worthy outlet, plunged him into adventures more befitting a clown. Once with the Duke of Buckingham he rented an inn on the New Market road, and turned inn-keeper supplying the husbands with drink and defiling their wives. He introduced himself, disguised as an old woman, into the house of a miser, robbed him of his wife and passed her on to Buckingham. The husband hanged himself ; they made merry over the affair. At another time he disguised himself as a chairman, then as a beggar, and paid court to the gutter girls. He ended by turning charlatan, astrologer, and vendor of drugs for procuring abortion, in the suburbs".[23]

Rochester's friend and companion was the Duke of Buckingham, a man of wit and vivacity. He possessed a knack of pleasant conversation ; was a scandal-monger, could sing and tell stories. By these talents he could ingratiate himself into the favours of ladies. Robert Sydney, or Beau Sydney, had the finest figure in the court. He succeeded in winning the affections of the Duchess of York.[24] Jermyn, Sedley, Ethredge, Talbot, Killigrew were some of the other wellknown gallants. These young and fashionable gentlemen of the court took a never-waning interest in amourous intrigues. To be perpetually pursuing new mistresses was their favourite pastime. The ladies also were of the same mind and that kept the game going. The beaux of the court were equally after maids, married women, and widows. Jealous husbands were rendered disconsolate by their activities.[25] They made ravages on the city[26] and sought to entice rich widows of merchants. They were also on a look-

23 TAINE, *History of English Literature*, vol. I, page 467,

24 *Memoirs of Chevalier Grammont*, page 313.

25 Lord Chesterfield in the *Memoirs of Chavalier Grammont.*

26 *Memoirs of Chevalier Grammont*, page, 289, Rochester.

out for young and beautiful ladies from the country who came to London attracted by the fashionable life in the metropolis.[27]

Amorous gallants and young ladies used to meet at court and in the fashionable resorts of London. The most important of these resorts were Hide Park, St. Jame's Park, Covent Garden, the Mall, New Spring Gardens. These promenades were regularly visited by men and women of taste. Some of them preferred to walk and others came in their coaches. A good-looking beau or a beautiful young woman was promptly taken notice of, pursued, and courted. Sometimes young ladies came in their masks and the gallants tried all shifts to induce them to unmask. At these places clever gallants could freely meet their displeased mistresses and bring them round. There was a regular trial of wit between the two sexes. As a consequence of these meetings letters were exchanged and rendezvous appointed. The health resorts like Tunbridge and York also helped the courtiers in keeping them in a holiday mood.[28] The beaux and ladies met also in the theatres specially the King's and the Duke of York's houses. Gallantries of all sorts were carried on while the play was in progress so much so that the innocent spectator was not able to follow the performance properly.[29] The number of Vizard-masks was every day on the increase,[30] and Orange Women[31] were to be met with inside and outside the theatre.

Dances and masquerades provided other sources of entertainment to the fashionable men and women of the court. The king himself was wellversed in the various kinds of dance and participated enthusiastically in dancing entertainments.[32] Masquerades were like-wise in vogue and enjoyed the patronage of the king and the queen. In the *Memoirs of Chevalier Grammont* we come across a fairly detailed account of a masquerade organized by the queen.[33] There was a revival of music after the Restoration and the king and the court took keen interest in it. " King Charles II had himself cultivated a warm affection

27 *Ibid*, page 299 (Mrs. Wetenhall)

28 NICOLL, A., *Restoration Drama*, page 114

29 Summers, Montague, *Restoration Theatre.*

30 *Ibid.* The stay of Queen's court at Tunbridge, and the Duke's at York.

31 PEPYS February 8, 1667.

32 PEPYS, *Diary*, December 31, 1661 ; also November 15, 1666.

33 *Memoirs of Chevalier Grammont*, page 143.

for the more modern style, both of vocal and instrumental music, during his residence in France, and he openly encouraged the performance of what was then looked upon as music of a very advanced character, both in the Chapel Royal and in his own private band and thus it was that what is now known as the school of the Restoration became firmly established in England within a very few years after his return from exile".[34] During the Restoration era serenades were very common, and were regarded as a legitimate part of courting. Taverns and coffee-houses served as meeting places for people where current topics were frankly discussed. The landlord played a very important part by receiving town gossip and passing it on ever to new persons.

This was in brief the condition of the society which clustered in and around the court after the restoration of Charles II, and the Comedy of Manners faithfully mirrors it. In their comic writings Ethrege, Wycherley, Congreve, and others of their class sought to portray the fashionable and courtly part of London. Naturally and necessarily the range of their works is limited. They confine themselves to a small portion of the metropolis, being perfectly satisfied with the depiction of the life and manners of the court and fashionable quarters. The city comes in only for the sake of satire. Likewise now and then we also come across characters coming from the country, but they only serve as a foil to the witty smart ones of the city. Young country women are represented as coming to London and being easily allured by the fashionable vices of the place.

Restoration drama in general and Comedy of Manners in particular neither catered for nor enjoyed the favour of the people. Drama ceased to be a thing of the nation and Restoration theatre unlike the Globe or Swan of Shakespeare's days, did not draw enthusiastic crowds of groundlings. "The spectators, then for whom the poets wrote and the actors played were the courtiers and their satellites The noblemen in the pit and boxes, the fops and beaux and wits or would-be-wits who hung on to their society, the women of the court, depraved and beauteous as the men, the courtezans with whom these women of quality moved and conversed on equal terms, made up atleast four-fifths of the entire audience. Add a sprinkling of footmen in the upper gallery, a stray country cousin or two scattered throughout the theatre, and the picture of the audienc is complete."[35]

[34] *Social England*—TRAIL and MANN, 549-50.

[35] NICOLL, Allardyce, *A History of Restoration Drama*, page 8.

"The just impression taught by you we hear,
The Player acts the world, the world the Player."[36]

In these words Richard Steele refers to the intimate relationship between the comedies of Congreve and the real facts of life. This remark, however, holds good not only in the case of Congreve's comic writings but in respect of the Comedy of Manners as a whole. We notice throughout a close similarity between the life as depicted in these dramatic pieces and that portrayed in the social documents of the time. The atmosphere of the court circle has been reproduced with remarkable faithfulness in these plays. The love of pleasure and ease and distaste for serious occupations of life which were the distinguishing features of Restoration gentlemen also mark the characters in the comedies of this period. Serious concerns of life are never able to disturb the complacency of the pleasure-seekers who move about with an easy grace in the comedies of Ethredge and his successors. They discard business half-disdainfully as being unworthy of their serious attention. Bellmour says :

"Business is the rub of Life, perverts our Aim, casts off the Bias, and leaves us wide and short of the intended mark. Come, come, leave Business to Idlers and wisdom to Fools they have need of 'em'. Wit be my Faculty and pleasure my occupation ; and let Father Time shake his Glass."[37]

Valentine is of the same mind. He says, "I never valued Fortune but as it was subservient to my pleasure."[38]

Dorimant declares 'I never was a lover of business.'[39]

The one unvaried theme of the Restoration comedies of the Manners school is pursuit of pleasure and we find in them all the importantcharacters, both male and female, striving after amusement. The only aim and purpose of their lives seems to be constant excitement arising from light-hearted sportiveness. They hate to be serious even for a brief while and even when considerable interests are at stake. Araminta says :

"Nay, come, I find we are growing serious, and then we are in great danger of being dull."[40]

[36] Richard STEELE, Prologue to *The Way of The World.*

[37] CONGREVE, *The Old Batchelor.* I. 1.

[38] Congreve, *Love for Love,* V. 5.

[39] ETHREDGE, *Sir Fopling Flutter* I. 1.

[40] Congreve, *The Old Batchelor,* II, 7.

Valentine even when he is threatened with the loss of his entire patrimony, meets his father and talks to him in a most airy fashion.

Love which the young gallants are so ready to profess to every young or rich. woman, affects them but superficially. It is neither deep-seated nor sincere. The entire attitude of these youngmen towards life being half-serious and wanton, it is unjust to expect from them constancy or faithfulness in love. The young gentlemen in these comedies valued more the excitement of the chase than the mistresses themselves. Vainlove, in Congreve's *Old Batchelor*, fixes an engagement with Laetitia, but instead of going to her, deputes his friend Bellmour to meet her in disguise. Some significant words are exchanged between the friends at this juncture:

Bellmour—Dear Frank! thou art the truest friend in this world.

Vainlove—Ay, am I not? To be constantly starting of Hares for you to course. We were certainly cut out for one another, for my Temper quits an Amour, just where thine takes it up.

As in real life Rochester or Buckingham could change a mistress as easily as a wig much in the same way Dorimant[41] can go on professing love to every young lady he meets with without meaning serious commitments. Ranger[42] who is in hot pursuit of his mistress Lydia, sees Christiana and begins to court her. Loveless,[43] inspite of his sentimental portestations, becomes faithless to Amanda and courts Berinthia.

The names of the characters in the plays are revealing. Very often they point to the true nature of the men. Names like Mr. Courtall, Mr. Freeman, Sir Fredrick Frolick, Mr. Ranger, Mr. Valentine, Mr. Horner, Bellmour, Vainlove, Carless, Aimwell are truly indicative of the love of pleasure and distaste for business of those who bore them. The same can also be said of a large number of fashionable women who occur in these comedies. The names, the dress, the gestures and manners, and the talks of these female characters depict, in an equal measure, the temper of the fashionable society during the age.

41 ETHREDGEY, *Sir Foppling Flutter.*

42 WYCHERLEY, *St James' Park.*

43 VANBURGH, *Relapse.*

There is a great deal of smart talk about nothing which, from the modern point of view, looks like an endless waste of time and breath. But the Restoration gentleman delighted in the lazy whiling away of time in the pursuit of pastimes. The plays are full of light-hearted courting not only between youngmen and youngwomen, but sometimes even the oldmen try to surpass their younger rivals in amatory practices and ultimately end by making fools of themselves.[44] We read about serenades[45] in these plays. Disguises are extremely common. These were of engrossing interest to the gallants of the Restoration times.

We have noticed earlier the extreme preoccupation of the king and the courtiers with matters relating to sex. We find this reflected in the plays. Without any exception, all the comedies deal with the theme of sex-relationship. The treatment is so open and frank that it has shocked many persons thus giving rise to a great controversey. The fact that so many plays dealing with the same topic only with slight variations did not appear boring to the fashionable people of the times serves to show clearly how deep and abiding was the interest of these people in erotic themes. The men in the plays behave towards their female companions with freedom and frankness that are not only surprising but also not infrequently shocking to the modern reader. The women often show even less restraint or hesitation than men. Gallants meet and discuss their mistresses and make and adjust their plans in mutual consultation.[46] Women likewise make no secret of their desires between themselves.[47] Old and young are alike involved in the business of endless love-making. Young maidens and married women of comparatively advanced years, sparks of the town and knighted gentlemen all alike are fond of the same game. Their actions are equally tainted with eroticism and their talks equally smutty. The extent to which the young gallants are absorbed in these amorous pursuits is amazing. Their minds are all the time occupied with thoughts of intrigues and mistresses. Bellmour's soliloquy—in Act 1 Sc. II of *The Old Batchelor* furnishes a very good indication of the attitude of young gallants towards love. They took delight in courting fashionable ladies of the town, and the plays are replete with accounts of such courtships. From the country

[44] Congreve, *Love for Love*, V. 2.

[45] Ehredge, *Love in a Tub*, III. 2.

[46] Congreve, *The Old Batchelor*, II. 1.; Ethredge, *She wou'd, if She cou'd*, I. 1; *Sir Fopling Flutter*, I. 1: Farquhar, *Beaux Stratagem*, II. 2., etc.

[47] Congreve, *Love for Love* II, 9.

rich and handsome young ladies were drawn by the fascination of the loose pleasures of the city.[48] They promptly received the attention of the 'honest gentlemen of the Town' and were initiated into the game. Some innocent young women of the country came to the city and fell victim to the mischievous designs of the city gallants.[49] As in actual life, so also in the plays, the city was the most convenient place for the fops to exercise their erotic talents. 'Cuckoldom', writes Congreve in the epilogue to *The Double Dealer*, 'of right to the cits belongs' Because illicit love-making was held to be admirable conduct, marriage was looked down upon as something singularly dull and foolish.

Belinda—Ha, ha, ha, O Gad, men grow such clowns when they are marry'ed.

Bellmour—That they are fit for no company but their wives.

Belinda—Nor for them neither in a little time—I swear, at the Month's end, you shall hardly find a marry'd man that will do a civil thing to his wife.[50]

Marriage, if at all favoured by fashionable young men and women, was only thought of as a means to certain other convenience and not as an end in itself.

Formerly women of wit married fools for a great estate, a fine seat, or the like; but now 'tis for a pretty seat only in Lincoln's-Inn-Fields, St. Jame's Field, or the Pall-mall.[51]

Marriage appeared too tame and insipid to have an appeal to the pleasure-seekers of the Restoration era who were mad after unconventionality. 'And among us lewd Mortals, the deeper the Sin the Sweeter' says Bellmour.[52] The right thing for a married man was to allow absolute freedom to his wife and to expect the same for himself from her. The Shoe-maker in *Sir Fopling Flutter* sums up the entire position regarding married life in Restoration times.

[48] GALLY and HARIANA (in Ethredge's) *She wou'd if She cou'd.*

[49] MRS. PINCHWIFE (Wycherley's) *The Country Wife*; MRS. PRUE (in Congreve's) *Love for Love.*

[50] CONGREVE, *The Old Batchelor*, V. 13.

[51] WYCHERLEY, *The Country Wife*, IV, 1.

[52] CONGREVE, *The Old Batchelor*, I. 1.

Shoe-maker—Zbud, there's never a man in the Town lives more like a Gentleman, with his wife than I do. I never mind her motions, she never enquires into mine; we speak to one another civilly, hate one another heartily, and because 'tis vulgar to lie and soak together, we have each of us our several settle bed.[53]

The husband therefore who insisted on his age-old authority or showed any signs of jealousy became an object of universal ridicule. At innumerable places in the comedies the jealous husband has been mentioned with contempt. This was quite in tune with the spirit of the times.[54]

The important characters in the comedies are typical of their age. The care-free fashionable fops in the plays are more or less copies of the gallants in real life. Their inclinations, occupations, ways, language, and appearance are the same. We find in these characters all the hall-marks of the Restoration gentlemen. 'Dorimant', says Dennis, 'is an admirable picture of a courtier in the court of King Charles the Second. But if Dorimant was designed for a fine gentleman by the Author, he was oblig'd to accommodate himself to the Notion of a fine gentleman, which the court and the Town both had at the time of the writing of this comedy. 'Tis reasonable to believe that he did so, and we see that he succeeded accordingly.[55] It was widely believed in his own times that Rochester was the original of Dorimant. It is needless to indulge in conjectures, as some have done, and try to identify different characters in the plays with the living gallants of the times, but similarity between such social figures as Rochester, Buckingham, Sedley, Jermyn, Killigrew on one hand and characters like Courtall, Dorimant, Horner, Bellmour, Mirabell on the other is so obvious that it hardly needs any stressing. The famous beauties of the times who participated with men freely and on terms of equality in the gay and loose social life of the times found themselves as faithfully represented by the comic play-wrights as their male companions. The charming heroines of Congreve, it has been pointed out, are all portrayals of one and the same woman Mrs. Bracegirdle.[56] The model was, as

[53] ETHREDGE, *Sir Fopling Flutter*, I. 1.

[54] *Memoirs of Chevalier Grammont*. The affair of Lady Chesterfield. 'In England they looked with astonishment upon a man who could be so uncivil as to be jealous of his wife.'—page 210.

[55] JOHN DENNIS, *A Defence of Sir Fopling Flutter*, 1722, pp. 8-9

[56] DAVIES, *Dramatic Miscellanies* (1784) pp. 337-8.

a matter of fact, ready at hand for any dramatist who wanted to introduce in his plays attractive, witty, and heartless women. He had only to acquaint himself with the court circle and there he found Belindas and Millamants in flesh and blood. He had only to be a faithful interpreter.

The incidents in the plays are also such as formed a part of the real experience of the fashionable people of the times. The meeting of young lovers, the love-pursuits, interruptions, surmounting of impediments, or ultimate frustration of clever plans—all these occurred in the plays as they did in the daily life of the courtiers of Charles II. Besides this general similarity, there are particular incidents in the plays that remind us of certain recorded happenings of the times. The reconciliation for instance, between Christiana and her lover Valentine in Wycherley's *St. James' Park* takes place much in the same way as the rehabilitation of Rechester in the favour of Mrs. Temple.[57] Bonamy Dobree has, in a single paragraph, collected together a number of instances of the borrowing of scenes directly from real life. He writes, "The same is true as regards scenes ; wherever they could, the comic writers of the period took what they were able from the life they saw around them. Dryden would never have considered it a compliment to learn what Lamb may have told him in Hades, and he wrote with pride of his son's *Husband His own Cuckold,* that 'the circumstances really happened us in Rome.' Cibber took his handkerchief scene in the *Careless Husband* from real life, and according to Dennis, the story on which Shadwell's *Squire of Alsatia* was built was a true fact. Mock marriages also so frequent in these comedies, as, for instance, in the *Country Wife,* had their part in reality, and were not only a device invented for stage purposes. It is on record that the Earl of Oxford carried out a sham ceremony with a famous actress of impregnable virtue, probably Mrs. Marshall, who upon appealing to the king got, no further redress than some monetary compensation.[58]

The pleasure-haunts of the time find frequent mention in the plays and are of utmost importance in the picture of the times. It was in these fashionable resorts that young-women displayed their person and dress in order to attract the attention of the city gallants.

Belinda—No ; if there were no men, adieu fine petticoats, we should be weary of wearing.

57 CHEVALIER Grammont, *Memoirs,* Chapter X, page 278.

58 Bonamy DOBREE—*Restoration Comedy,* p. 28.

Lady Brute—And adieu plays, we should be weary of seeing 'em.

Belinda—Adieu Hyde-Park, the dust would choke us.

Lady Brute—Adieu St. Jame's, walking would tire us.

Belinda—Adieu London, the smoke would stifle us.

Lady Brute—And adieu going to church, for religion would never prevail with us.[59]

The sparks on the other hand visited these centres of pleasure and intrigue regularly and punctually. They pursued, the women who, sometimes to heighten the excitement of the chase, wore vizard-masks ; sometimes flattered them, sometimes railed at them and often entered into wit-combats with them. *Billet-doux* were exchanged, future meeting places appointed and the various forms of gallantry practised. The men took immense delight in these love-pursuits and boasted of their success without any reserve.[60] On account of the excessive fondness for the life of fashionable vice which was to be found in the Hyde Park, St. James's Park, Cavent Garden, the Mall, the Spring Garden, the theatres, the church, and numerous other places, there was a consequent hatred for and dread of the country in the hearts of the youngmen and young women of the city.

Lucy—The country is as terrible, I find, to our Young English ladies, as a monastery to those abroad, and on my virginity, I think they would rather marry a London jailer; than a high sheriff of a country, since neither can stir from his employment. Formerly women of wit married fools for a great estate, a fine seat or the like, but now 'tis for a pretty seat only in Lincoln's Inn-Filelds, St. James' Fields or the Pall-Mall.[61]

The coffee-houses also served an important purpose as the meeting place of fashionable youngmen and women. They "were generally frequented by gamblers and wits. Jeremey says, "Ah Pox confound that Will's coffee-House, it has ruined more young men than the Royal Oak lottery, nothing thrives that belongs to it".[62]

[59] VANBURGH, *The Provoked Wife*, II. 3.

[60] CONGREVE, *Love for Love*, III. 3.

[61] WYCHERLY, *Country Wife*, IV, 1.

[62] CONGREVE, *Love for Love*, I, 1.

A large number of scenes in the comedies from Ethrege and Sedley down to Farquhar, are laid in these pleasure-haunts and these scenes faithfully depict what actually, happened every evening at the 'Park time.' A visit to the Pall-Mall, the Mulberry Garden or the theatre constituated an unalterable part of the daily routine of Rochester, Buckingham, Sidney, Killigrew, and their friends. Likewise we cannot dissociate Dorimant or Mirabell from the gay life of the promenades, the coffee-houses and the theatres.[63]

In the foregoing paragraphs we have tried to inter-relate the real social life of the Restoration era with the picture supplied by the comedies of the period belonging to the Manners school, and we have found a great deal of similarity not only in the general quality of the two but also in a large number of details. This close affinity between life and art which we discover in the plays is greatly helpful in the creation of realistic illusion. It is to be noticed that details of daily life are reproduced in the plays with very little variation and it is futile to look for any attempts at improving or refinement. The facts of life, and often they are ugly facts of life, have been set down in their utter reality. Far from suppressing any shocking details of the social life, the playwrights sometimes show a tendency towards an over-emphasis on the seemy aspects of life. It is on this account that we find so much talk about the vulgarity and obscenity of the Restoration Comedy of Manners.

[63] *Young Mirabel*—Ten times more! the play-house is the element of poetry, because the region of beauty. The ladies methinks have a more inspiring triumphant air in the boxes than anywhere else; they sit commanding on their thrones with all their subject slaves about them. Their best clothes, best looks, shining jewels, sparkling eyes, the treasure of the world in a ring. Then there's such a hurry of pleasure to transport us; the bustle, noise, gallantry, equipage, garters, feathers, wigs, bows, smiles, ogles, love music and applause. I wish that my whole life-long were the first night of a new play.

Farquhar's *The Inconstant*, V. 1.

THE PROVINCES OF THE DELHI SULTANATE

U. N. DAY, M.A.

The Empire of the Delhi Sultans was divided into Provinces from a very early period. The terms Wilayat, Iqlim, and even Iqtas have been used by the chroniclers, for what they wanted to express as provinces. But the number and extent of the provinces varied from time to time as the extent of the Empire expanded or contracted—a prominent feature of the Delhi Sultanate. The boundary of the Empire expanded to big dimensions during the reigns of Alauddin Khilji and Mohammad Tughlak while for the rest of the period it was more or less confined to the north of Deogiri.

The provincial Government was a replica of the Central Government, and as such for its working it had all the paraphernalia of the Central Government. The Governor of a province had such title: as Wali, Naib, or Muqti and he was directly responsible to the Central Government. The people of the province, if dissatisfied with the Governor could send petitions to the Sultan, which is clearly borne out by the example of the people of Lakhnauti who sent petitions to Sultan Ghiyasuddin complaining against the oppressive rule of the Governor of the province.[1] The Sultans on their part never neglected their petitions, rather took steps to redress their grievances. This served as a check on the tyranny of the governors.

The Governors were subject to recall or transfer by the Central Government, though no fixed period was assigned for the tenure of office of a governor of a province, nor were transfers common. The case of recall of Katlagh Khan, the Governor of Deogiri and the appointment of Aziz Hammar in his place, during the reign of Mohammad Tughlak affords us a fairly good example. But such transfers were looked upon as disgrace by the governors and the Sultans often had to force their orders with the aid of the military.

To keep a constant watch and control over the movements and activities of the Governors the Sultans kept barids in the Provinces.[2] These barids informed the Sultans of all the occurances in the Province.

As to other officers of the Provincial Government little light is thrown by the contemporary historians and much is

[1] Elliot, III. p. 284.

[2] Zia, p. 40.

left for deduction from their astray remarks. Thus Zia has remarked about the early part of the reign of Mohammad Tughlaq, that from the provinces detailed accounts of income and expenditure were taken by the Central Government and the surplus was strictly realized.[3] Inspections and audit of the accounts of the provinces were also done during the reign of Firoz Tughlaq.[4] From these two remarks we can safely deduce that Provincial Government too had its wizarat with some officer similar to the wazir of the Central Government and karkuns, to keep accounts, so that they could be properly submitted when demanded by the Central Government.

Types of Provinces.

All the provinces of the Empire did not enjoy the same status. In those days with no means of quick communication the Sultan naturally exercised a greater control and authority over those provinces which were situated near the capital. But the distant provinces such as Bengal, Deccan, Gujrat or Malwa enjoyed considerable freedom. The contemporary chroniclers have used three terms Naib, Wali and Muqti for the heads of the Provinces. Mr. Moreland has defined Wali as a governor of province or a localized officer serving directly under the orders of the king or his minister.[5] The term Muqti has various meanings but Mr. Moreland has shown that for all practical purposes Wali and Muqti are synonymous terms.[6] The chief difference between the two was that of status and dignity Wali was higher than Muqti and had greater dignity.

There were two distinct types of provinces, the Major provinces and the minor provinces. The major province was that which for all practical purposes was like a kingdom and situated at a distance from the centre. Bengal and Deccan enjoyed this position. The Governor of Lakhnauti during the reign of Ghiyasuddin Tughlaq was Nasiruddin and he is mentioned by Zia as Sultan Nasiruddin.[7] The title Sultan indicates that the Governor of Lakhnauti had a higher position than others. These major provinces were further subdivided into subprovinces. The province of Bengal was divided into three as early as the reign of Balban and we find mention of Lakhnauti,

[3] Zia, pp. 468 & 469

[4] Elliot III. p. 357.

[5] Moreland-Agrarian System of Muslim India p. 216.

[6] *Ibid* pp. 216 to 222.

[7] Elliot III p. 234

Satgoan and Sonargaon as subprovinces of Bengal.[8] The revolt of Malik Fakhruddin during the reign of Mohammad Tughlaq who killed Kadar Khan, the Governor of Lakhnauti, plundered the treasury and the three provinces of Bengal i.e. Lakhnauti Sonargaon and Satgaon,[9] throws further light on the subdivision of the province. The governor of Lakhnauti was like a viceroy over these subprovinces, and was directly responsible to the Central Government and the treasury of the three divisions was at Lakhnauti, from where the surplus was sent to Delhi.

Turning to Deccan we find that it was also divided into four provinces of Deogiri, Mabar, Telingana and Dwar Samudra. The proper annexation and division of Deccan was effected during the reign of Ghiyasuddin and Mohammad Tughlaq and it is also to be remembered that Deccan was lost by Mohammad Tughlaq during his own life time. Alauddin Khilji's arrangement of the Deccan was entirely on a different basis. He left the Hindu rulers of the kingdom in their possession but reduced them to the status of feudatory chief, Rai Ramdeo and Rai Laddar Deo both remained in their territories subject to the payment of annual tribute.[10] Mohammad Tughlaq's arrangement of the Deccan was some what similar to that of Bengal. He divided the Maratha country into four divisions with Surur-ul-Mulk, Makhlis-ul-Mulk, Yusuf Baghra and Aziz Hammar or Khammar as the four divisional governors. Deogiri was made Head Quarters of the Deccan under a Wazir and a Naib Wazir. Imadul Mulk Sarir Sultani was made the Wazir and Dharaohar was made Naib Wazir.[11] Thus the Wazir of Deogiri became the supervisor over the four divisional governors and was like the Amin, Kazi Fazilat of the reign of Sher Shah.

The minor provinces formed the chief bulk of the Empire and over them the Sultan had his full control and influence. The river country besides Delhi had three more provinces of Meerut, Baran and Kol. Below the river country came Kanauj and below that Korah. Beyond the Ganges we find Amroha and Sambhal and on the north next to these Badaun. The next province recorded to the east of Badaun was Oudh, to the south east of Oudh was Zafarabad (later on Jaunpur). To the north of Gogra was Bahraich, then came a portion of Oudh including Gorakhpur, and then Tirhut or North Behar. Beyond

[8] Ibid p. 120.

[9] Elliot III p. 242.

[10] Elliot III pp. 204, 205, 206.

[11] De. Tab-i-Akbari p. 230

Tirhut was Lakhnauti, crossing the Ganges and returning westward we have the province then known as Behar separate from Tirhut. The next province was Mahoba and next to it Bayana which was united with Gwalior during the period when the fortress belonged to the kingdom. West of Delhi were the provinces of Sirhind, Samana and Hansi and beyond them Lahore Dipalpur and Multan. The last three were the frontier provinces. Gujrat and portions of Malwa also formed provinces though it seems that Delhi Sultans had only a nominal hold over them. In Rajputana, for short period Chitor formed a province. These were the chief provinces of the Empire, and approximately remained as such throughout the two centuries of Turkish Rule. But these provinces had no fixed boundaries and often some provinces were intermingled with each other. The governor of these provinces were called the Walis and Muqtis according to the importance of the province.

The Working of the Provincial Government.

The provinces were further divided and the smallest unit in a province was the village. Several villages together constituted the Pargna. According to Afif during the reign of Firoz Tughlaq the Doab country had fifty two paraganas.[12] This brings us to the question that whether there was any intermediate stage between the paragana and province. Some historians are of opinion that shiq was a subdivision of a province during the 14th century,[13] but the term shiq does not appear to have taken a difinite implication so early. The particular passage referred to in this connection is Mohammad Tughlaq's subdivision of Deccan land into four parts. But the Deccan as pointed out earlier in this discussion was not divided into four divisions of a single province. It was divided into four subprovinces with head quarters at Deogiri under a Wazir. Shiq as used by Zia refers more to a province than a subdivision of a province. Again, during the reign of Firoz Tughlaq we find that while describing the town of Hasar Firoza Afif has written that "before this time in the days of former kings this country had been entered in the revenue accounts as belonging to the shiq of Hansi."[14] Hansi was a province and not a subdivision of a province and Afif certainly meant a province or a part of the kingdom when he wrote shiq of Hansi. At another place Afif has written that good state of things prevailed in every Iqta and Shiq. Zia and Afif both seem to have used the

[12] Afif p. 295.

[13] Ishwari Pd. "History of the Qoraunah Turks in India" p. 263.

[14] Afif, p. 128.

term to convey the sense of a part of kingdom and I agree with the view of Mr. Moreland[15] that shiq in the fourteenth century meant something similar to a province.

Turning to the revenue system of the Provincial Government two questions arise firstly the relaction with the Central Government and secondly the relation with the cultivators.

The Provincial Government had to pay a stated sum to the Central Government, because we find that Ghiyasuddin Tughlaq gave orders that the ministry should not make an increase of more than one tenth or one eleventh on the provinces. This order was concerned with the surplus revenue. From the order it is clear that the surplus was a fixed sum and was liable to be increased by the ministry. Such a system served well with the needs of the time. What was the system prevailing during the reign of Alauddin we do not exactly know, but it appears a similar arrangement as that of Ghiyasuddin must have existed, obviously because it served best when the interest of the Sultan was supreme. During the early period of Mohammad Tughlaq's reign detail accounts of income and expenditure of the provinces were taken. But later on the revenues of the provinces were farmed out. This farming of the revenues continued during the reign of Firoz-Tughlaq. The second question i.e. the relation with the cultivators is even more obscure. However there is one passage dealing with the reign of Ghiyasuddin Tughlaq that the Sultan ordered that the collectors of revenues and governors should make enquiry and should forbid the head-man to take more from the people than the revenue demanded by the king.[16] This passage indicates firstly that the demand from the cultivators was a fixed sum and secondly the amount was fixed by the Central Government.

Thus we see that the Sultans of Delhi, though hardpressed by numerous problems had not altogether neglected the provinces. All the Sultans, of course leaving aside the weaklings, made efforts for greater centralisation. Even the meagre accounts of contemporary historians show that the provinces too enjoyed the same amount of peace and prosperity as the centre. Considering the problems of the time, the Sultan did well to leave a great field for initiative to the governors of the major provinces and contented themselves with confining their activities in the minor provinces.

15 Moreland: Agrarian system of Muslim India. p. 25.

16 J. A. S. B. 1871 p. 280.

THE CONCEPTION AND IDEALS OF EDUCATION IN ANCIENT INDIA

DR. A. S. ALTEKAR, M.A. D.Litt.

THE IMPORTANCE OF THE SUBJECT: The study of the history and main features of education in ancient India is a subject of great interest and importance to the student both of education as well as of civilisation. It is an oft-repeated observation that educational institutions mirror the ideals of a nation and enable us to understand the spirit of its civilisation. This was more especially the case in ancient times when schools and colleges were the chief centres, wherein the rising generation could be imbued with the traditions of the race and induced to adopt them in its own life. We should not forget in this connection that paper and printing were unknown, and so the masses could be approached not with the help of the modern means of newspapers, magazines or cheap and popular books, but only through the influence that indirectly infiltrated to them from the limited number of students that used to receive education in schools and colleges.

ADVANTAGES OF LONG AND CONTINUOUS HISTORY: Ancient Indian civilisation is one of the most interesting and important civilisations of the world; if we want to understand it properly, we must study its system of education which preserved, propagated and modified it during the course of more than four thousand years. This circumstance lends an added importance and interest to the study of ancient Indian education. We can visualise here more clearly than we can do elsewhere the effects of changing ideals and circumstances on the features and fortunes of the educational system. We very often hear of such and such a thing being characteristic of ancient Indian system of education. The statement may however be only partially correct; it may be true of one period of ancient Indian history and untrue of another. Thus, for instance, the statement that the caste determined the career and profession of an individual, is substantially true of the Smṛti period, but quite misleading about the Vedic age. The history of ancient Indian education will show, for instance, that at one time reason was regarded as superior to authority, but that society changed its attitude completely at a later age; that at one time Hindu society favoured female education, but at a later date began to discourage it; that at one time it attached great importance to manual skill and arts but at a later period began to hold them

in contempt. How and why such changes took place in the educational system and ideals becomes quite clear to the student of ancient Indian education, as its history is spread over several millenniums.

SOURCES: Books exclusively devoted to the discussion of the various aspects, theories and ideals of education were hardly in existence even in the West before the 17th century A.D. It is no wonder that the same should have been the case in ancient India also. The student of the history of education, who desires to have a first-hand knowledge of the educational theories and practices of the ancient Indians, does not have the facility of referring to a few standard books written on the subject. Dharmasūtras and Smṛtis no doubt devote some sections to the discussion of the main features of what may be conveniently described as secondary and higher education; but their treatment of the subject is more descriptive than critical. The fundamental conception, aims and principles of education have not been systematically discussed by them; they have to be rather inferred from their stray observations. The most promising source of information for the topics of this and the next chapter is the mass of floating verses of unknown authorship, traditionally handed down from generation to generation in cultured circles, and reflecting their well-considered views and opinions about the conception, aims and principles of education.

MEANING OF EDUCATION: Before we proceed with the discussion of this topic, we have to point out that like some modern educationalists, ancient Indians also have used the term education in a wider as well as in a narrower sense. In its wider sense education is self-culture and self-improvement and the process will go on to the end of one's life. A thinker observes that the true teacher is a student to the end of his life.[1] No college or course can teach a doctor all that he has got to learn; his practice will go on gradually widening the sphere of his knowledge. What is true of the doctor is also true of the lawyer, the painter, the trader and the sculptor. When however we proceed to discuss the conception and aims of education, we use the term in its narrower sense as denoting the instruction and training which a youth receives during his studenthood before he settles down to his career or profession. We refer to those special influences which are designedly brought to bear on the rising generation in the educational institutions before it enters the struggle for life.

[1] यावज्जीवमधीते विप्रः ।

EDUCATION AS ILLUMINATION : From the Vedic age downwards the central conception of education of the Indians has been that it is a source of illumination, giving us a correct lead in the various spheres of life. Knowledge, says one thinker, is the third eye of man, which gives him insight into all affairs and teaches him how to act.[2] Nothing gives us such an unfailing insight as education, says the *Mahābhārata*;[3] in the spiritual sphere, it leads to our salvation,[4] in the mundane sphere it leads to all-round progress and prosperity. The illumination given to us by education shatters illusions, removes difficulties and enables us to realise the true value of life. A person, who does not possess the light of education, may be really described as blind.[5] The correct insight, which men and women get from education, naturally increases their intelligence, power and efficiency ; ancient Indians have emphatically averred that intellect, as developed and refined by education, is the real power in this world.[6] The uses of education are too diverse to be exhaustively enumerated ; it nourishes us like the mother, directs us to the proper path like the father, and gives us delight and comfort like the wife.[7] It increases our fame, destroys our difficulties and makes us purer and more cultured. When we are in the solitude of a journey or of a foreign country, it serves us as a valued companion. It is thus a veritable desire-yeilding tree.[8] It is at the root of all human happiness ; it increases our efficiency, it enables us to get fame and wealth by securing us respect in public assemblies and royal court. The wealth we thus get not only leads to our happiness, but also enables us to perform meritorious works of public utility and dis-

[2] ज्ञानं तृतीयं मनुजस्य नेत्रं समस्ततत्त्वार्थविलोकदक्षम् ।
तेजोऽनपेक्षं विगतान्तरायं प्रवृत्तिमत्सर्वजगत्त्रयेपि ॥ *Subhāshitaratnasandoha*, 194.

[3] नास्ति विद्यासमं चक्षुर्नास्ति सत्यसमं तपः । XII. 339.6.

[4] सा विद्या या विमुक्तये ।

[5] अनेकसंशयोच्छेदि परोक्षार्थस्य दर्शकम् ।
सर्वस्य लोचनं शास्त्रं यस्य नास्त्यन्ध एव सः । *S.R.B.*, p. 30.2.

[6] बुद्धिर्यस्य बलं तस्य ।

[7] मातेव रक्षति पितेव हिते नियुंक्ते कान्तेव चापि रमयत्यपनीय खेदम् ।
लक्ष्मीं तनोति वितनोति च दिक्षु कीर्तिं किं किं न साधयति कल्पलतेव विद्या ॥
Ibid., p. 31.14.

[8] श्रियः प्रदुग्धे विपदं रुणद्धि यशांसि सूते मलिनं प्रमार्ष्टि ।
संस्कारशौचेन नरं पुनीते शुद्धा हि भूमिः किल कल्पधेनुः । *Ibid*, p. 31.12.
विद्या बन्धुजनो विदेशगमने । *N. S.*, 16.

[9] विद्या ददाति विनयं विनयाद्याति पात्रताम् ।
पात्रत्वाद्धनमाप्नोति धनाद्धर्मं ततः सुखम् ॥

charge religious duties of different types. This indirectly leads to our salvation.

EDUCATION AS AN AGENCY OF IMPOROVEMENT: The illumination, insight and guidance which education gives effects a complete transformation. 'If one human being is superior to another,' says a Vedic thinker, 'it is not because he possesses an extra hand or eye, but because his mind and intellect are sharpened and rendered more efficient by education.[10] Devoid of education, says Bhartṛhari, we are mere beasts;[11] education elevates us into human beings. Life without education is therefore utterly futile and worthless.[12] The same idea is expressed by the theologian in his own language when he says that even a Brahmana continues to remain a Shudra till he receives proper education, refining his nature and making him cultured.[13] It will be thus seen that ancient Indians agreed with Mulcaster in holding that education helps nature to perfection.

DIVERSE FUNCTIONS OF EDUCATION: Education brings about this great transformation in a variety of ways. To begin with, it gives us proper notions of cleanliness and manners and thus makes us more acceptable to our fellow beings. It is interesting to note that ancient Indians attached great importance to this topic and have laid down that the rules of cleanliness and etiquette should be first taught to the young student before anything else (*Manu*, II. 69). Education removes our prejudices and makes us more reasonable and considerate by enabling us to understand viewpoints different from our own.[14] It sharpens the intellect, improves the grasping power and develops the power of discrimination and thus protects us from falling into errors.[15] It strengthens our moral nature and enables us to stand the severest temptations of life. Some of the greatest tragedies of life occur because we are unable to control ourselves. True education refines and strengthens our moral fibre and thus prevents us from being affected by the wayward breezes of fleeting passions and prejudices. Montaigne

[10] अक्षण्वन्तः कर्णवन्तः सखायो मनोजवेषु असमा बभूवुः । *R.V̇.*, X. 71.7.

[11] विद्याविहीनः पशुः । *N.S.*, 16.

[12] शुनः पुच्छमिव व्यर्थं जीवितं विद्यया विना ।
न गुह्यगोपने शक्तं न च दंशनिवारणे ॥ *S.R.B.*, p. 318.

[13] जन्मना जायते शूद्रः संस्काराद् द्विज उच्यते ।
विद्यया याति विप्रत्वं त्रिभिः श्रोत्रिय उच्यते ।

[14] अज्ञः सुखमाराध्यः सुखतरमाराध्यते विशेषज्ञः । *N.S.*, 2.

[15] यस्य नास्ति विवेकस्तु केवलं यो बहुश्रुतः ।
न स जानाति शास्त्रार्थान्दर्वी पाकरसानिव । *S.R.B.*, p. 41.8.

has said, 'If the mind be not better disposed by education, if the judgment be not better settled, I had much rather that my scholar had spent his time at tennis.' Ancient Indians would certainly have fully concurred with this view.

EDUCATION INCLUDES PHYSICAL DEVELOPMENT: A strong will however presupposes a strong body; ancient Indians have therefore emphasised on the mind of the young student the importance of attending to the proper development of his body by pointing out that a strong physique is a *sine qua non* of success not only in mundane but also in religious matters.[16] The student was expected to be able to defend himself by being an expert in the use of the *lathi*, which he was always to carry about as a part of his uniform. Every morning he must perform *prāṇāyāma* and go through the exercise of *Sūrya-namaskāra* in order to strengthen his lungs and bring about an all-round development of his body.

EDUCATION NOT MERELY BOOK LEARNING: Since illumination is the central conception in education, it is needless to add that mere book learning was not regarded as synonymous with education. It has been pointed out that a man may have studied different branches of knowledge and yet remain uneducated, if he has not developed an insight and obtained an illumination as a result of his studies; he is a really educated man, who shines as a man of action.[17] True education also solves the problem of the bread. It may not make us wealthy, for wealth often depends upon luck. But it ought to enable us to get a decent living. Even a parrot is enabled to get its food, points out one thinker, by learning a few words; why then should a man with true education fail to get his livelihood ?[18] Education was never to be regarded as a mere bread and butter proposition; persons entertaining such a view were severely condemend in ancient India.[19] It was however realised that if a man does not live by the bread alone, he cannot live without it either. Education therefore, while giving us an illumination, insight and culture, ought to enable us to live as respectable and self-

[16] शरीरमाद्यं खलु धर्मसाधनम् । *Kumārasambhava*, V.

[17] शास्त्राण्यधीत्यापि भवन्ति मूर्खा यस्तु क्रियावान्पुरुषः स एव ।
सुचिंतितं चौषधमातुराणां न नाममात्रेण करोत्यरोगम् ॥ *S. R. B.*, p. 40.21

पठकः पाठकश्चैव ये चान्ये शास्त्रपाठकाः ।
सर्वे व्यसनिनो ज्ञेया यः क्रियावान्स पंडितः । *Mbh.* III. 313.110.

[18] सद्विद्या यदि का चिन्ता वरोकोदरपूरणे ।
शुकोऽप्यशनमाप्नोति रामरामेति च ब्रुवन् ॥ *S.R.B.*, p. 31.9.

[19] यस्यागमः केवलजीविकायै तं ज्ञानपण्यं वणिजं वदन्ति । *Mālavikāgnimitra*, I. 17.

supporting citizens. It should not only make us fit to live, but also fit us to get a living.

SUMMARY: To sum up, education was regarded as a source of illumination and power, which transforms and ennobles our nature by the progressive and harmonious development of our physical, mental, intellectual and spiritual powers and faculties.[20] It thus enables us to live as honorable and useful citizens of society and indirectly helps us to make progress in the spiritual sphere, both in this life and in the life to come.

AIMS AND IDEALS OF EDUCATION: Let us now see what were the aims and ideals of education in ancient India. Infusion of a spirit of piety and religiousness, formation of character, development of personality, inculcation of civic and social duties, promotion of social efficiency by the proper training of the rising generation in the different branches of knowledge and the preservation and spread of national culture may be described as the chief aims and ideals of ancient Indian education. Let us now see what were the views of our educationalists about each of them.

INFUSION OF PIETY AND RELIGIOUSNESS: Religion played a large part in life in ancient India and teachers were usually priests. It is therefore no wonder that infusion of a spirit of piety and religiousness in the mind of the rising generation should have been regarded as the first and foremost aim of education. The rituals which were performed at the beginning of both the literary and professional education,—primary as well as higher,—the religious observances (*vratas*), which the student had to observe during the educational course, the daily prayers which he offered morning and evening, the religious festivals that were performed with eclat in the school or the preceptor's house almost every month,—all these tended to inspire piety and religiousness in the mind of the young student. It was the spiritual background that was thus provided which was expected to help the student to withstand the temptations of life. The very atmosphere, in which he lived and breathed, impressed upon him the reality of the spiritual world and made him realise that though his body may be a product of nature, his mind, intellect and soul belong to the world of spirit, the laws of which ought to govern his conduct, mould his character and determine the ideals of his life.

LIMITATIONS ON RELIGIOUSNESS: Though the educational system thus provided the background of piety and religiousness,

20 This conception closely resembles that of Pestolozi.

its aim was not to induce the student to renounce the world and become a wanderer in the quest of God like the Buddha or Tulsidas. Even in the case of Vedic students, who intended to follow a religious career, only a microscopic minority used to remain life-long Brahmachārins, pursuing the spiritual quest: the vast majority was expected to become and did become householders. The direct aim of all education, whether literary or professional, was to make the student fit to become a useful and pious member of society.

FORMATION OF THE CHARACTER: The illumination and power, which men and women received from education, was primarily intended to transform and ennoble their nature. The formation of character by the proper development of the moral feeling was therefore the second aim of education. Like Locke, ancient Indian thinkers held that mere intellectual attainments were of less consequence than the development of a proper moral feeling and character. The Vedas being held as revealed, educationalists naturally regarded their preservation as of utmost national importance; yet they unhesitatingly declare that a person of good character with a mere smattering of the Vedic knowledge is to be preferred to a scholar, who though well versed in the Vedas, is impure in his life, thoughts and habits.[21] Montaigne has observed, "Cry out, 'there is a learned man' and people will flock round him; cry out 'there is a good man', and people will not look at him." Indian thinkers were aware of this human natural tendency and wanted to counteract it by pointing out that character was more important than learning. One thinker goes to the extent of saying that he alone is learned who is righteous.[22] This opinion tallies remarkably with that of Socrates, who held that virtue is knowledge. Evil effects of divorcing power from virtue, intellectual and scientific progress from moral and spiritual values, which are being so vividly illustrated in the west in the modern age, were well realised by ancient Indians; they have therefore insisted that while a man is being educated, his regard for morality ought to be developed, his feeling of good will towards human beings ought to be strengthened and his control over his mind ought to be perfected, so that he can follow the beacon light of his conscience.[23]

[21] सावित्रीमात्रसारोऽपि वरं विप्रः सुयंत्रितः ।
नायंत्रितस्त्रिवेदोपि सर्वाशी सर्वविक्रयी ॥ *M.*, II.

[22] धर्मं हि यो वर्धयते स पण्डितः । *Mbh.*, XII. 321.78.

[23] Compere the view of Herbert: Tho aim of education should be to instill such ideas as will develop both the understanding of the moral order and a conscientious spirit in carrying it out. *Great Educationalists*, pp, 175-6.

In other words, education ought to develop man's ideal nature by giving him a sure moral feeling and by enabling him to control his original animal nature. The tree of education ought to flower in wisdom as well as in virtue, in knowledge as well as in manners.

HOW CHARACTER WAS TO BE FORMED : Direct injunctions to develop a sense of moral rectitude are scattered over almost every page of books intended for students; they were also orally given to them by their teachers every now and then. Apart from them, however, the very atmosphere in which students lived, was calculated to give a proper turn to their character. They were under the direct and personal supervision of their teacher, who was to watch not only over their intellectual progress but also over their moral behaviour. Ancient Indians held that good character cannot be divorced from good manners; the teacher was to see that in their every day life students followed the rules of etiquette and good manners towards their seniors, equals and inferiors. These rules afforded an imperceptible but effective help in the formation of character. The rituals which students occasionally performed and the prayers which they offered ever day were calculated to emphasise upon their mind the fact that the student-life was a consecrated one and that its ideals could be realised only by those who did not swerve from the strict and narrow path of duty. Examples of national heroes and heroines like Hariśchandra, Bhīshma, Rāma, Lakshmaṇa, Hanumān, Sītā, Sāvitrī and Draupadī, which were prominently placed before students, also served to mould their character in a powerful manner. Character was thus built up partly by the influence of direct injunctions, partly by the effect of continued discipline and partly by the glorification of national heroes, held in the highest reverence by society.

PERSONALITY NOT REPRESSED : There is a general impression that Hindu educationalists suppressed personality by prescribing a uniform course of education and enforcing it with an iron discipline. Such however was not the case. The caste system had not become hidebound down to *c.* 500 B.C. and till that time a free choice of profession or career was possible both in theory and practice. Later on when the system became rigid, the theory no doubt was that everybody should follow his hereditary profession, but the practice permitted considerable freedom to enterprising individuals, as will be shown in the following Chapter. It is wrong to conclude from some stray passages that the whole of the Brahmana community, if not the whole of the Aryan community, was compelled to devote twelve years to

the task of memorising the Vedic texts.[24] Kshatriyas and Vaishyas never took seriously to the Vedic learning; only a section of the Brahmanas devoted themselves seriously to the Vedic studies, while the rest of the community learnt only a few Vedic hymns necessary for their daily use, and devoted their main energy to the study of subjects of their own choice like logic, philosophy, literature, poetics or law. The educational curriculum of the Smrtis represents the Utopian idealism of the Brahmana theologian and not the actual reality in society.

DEVELOPMENT OF PERSONALITY: The development of personality was in fact the third aim of the educational system. This was sought to be realised by eulogising the feeling of self-respect, by encouraging the sense of self-confidence, by inculcating the virtue of self-restraint and by fostering the powers of discrimination and judgment. The student was always to remember that he was the custodian and the torch-bearer of the culture of the race. Its welfare depended upon his proper discharge of his duties. If the warrior shines on the battlefield, if the king is successful as a governor, it is all due to their proper training and education (*A.V.*, XI. 5). To support the poor student was the sacred duty of society, the non-performance of which would lead to dire spiritual calamities. A well trained youth, who had finished his education, was to be honoured more than the king himself. It is but natural that such an atmosphere should develop the student's self-respect in a remarkable manner.

INFLUENCE OF SELF-CONFIDENCE: Self-confidence was also fostered equally well. The Upanayana ritual, as we shall see in a later Chapter, used to foster self-confidence by pointing out that divine powers would co-operate with the student and help him on to the achievement of his goal, if he on his part did his duty well. Poverty need not depress him, he was the ideal student who would subsist by begging his daily food. If he was willing to work in his spare time, he could demand and get free education from any teacher or institution. Self-reliance is the mother of self-confidence, and the Hindu educational system seeks to develop it in a variety of ways, as we shall see in course of time. Uncertainty of the future prospect did not damp his self-confidence. If the student was following a professional course, his career was already determined. There was no overcrowding or cut-throat competition in professions. If he was taking religious and liberal education, poverty was to be the ideal of his life. His needs ought to be, and as a matter of fact were, few, and the state and society supplied them well.

[24] *E. g., Manu*, III. 1, II. 168.

INFLUENCE OF SELF-RESTRAINT: The element of self-restraint, that was emphasised by the educational system further served to enrich the student's personality. Self-restraint that was emphasised was distinctly different from self-repression. Simplicity in life and habits was all that was insisted upon. The student was to have a full meal, only it was to be a simple one. The student was to have sufficient clothing, only it was not to be foppish. The student was to have his recreations, only they were not to be frivolous. He was to lead a life of perfect chastity, but that was only to enable him to be an efficient and healthy householder when he married. It will be thus seen that what the educationists aimed at did not result in self-repression, but only promoted self-restraint that was so essential for the development of a proper personality. Nor was this self-restraint enforced in Spartan ways of correction and punishment. The teacher was required to use persuasion and spare the rod as far as possible. He was liable to be prosecuted if he used excessive force. Self-discipline was developed mainly by the formation of proper habits during the educational course.

DISCRIMINATION AND JUDGMENT DEVELOPED: It may be further pointed out that powers of discrimination and judgment, so necessary for the development of proper personality, were well developed in students taking liberal education and specialising in logic, law, philosophy, poetics or literature. These branches of study bristled with controversies and the student had to understand both the sides, form his own judgment and defend his position in literary debates. It was only with the Vedic students that education became mechanical training of memory. This became inevitable in later times when the literature to be preserved became very extensive and the modern means of its preservation in the form of paper and printing were unavailable. In earlier days even Vedic students were trained in interpreting the hymns they used to commit to memory.

STRESS ON SOCIAL DUTIES: The inculcation of civic and social duties, which was the fourth aim of the educational system, was particularly emphasised. The graduate was not to lead a self-centred life. He must teach his lore to the rising generation even when there was no prospect of a fee. He was enjoined perpetuation of race and culture by raising and educating progeny. He was to perform his duties as a son, husband, and father conscientiously and efficiently. His wealth was not to be utilised solely for his own or his family's wants; he must be hospitable and charitable. Particularly emphatic are the

words in the convocation address, emphasising these duties.[25] Professions had their own codes of honour, which laid stress on the civic responsibilities of their members. The physician was required to relieve disease and distress even at the cost of his life. The warrior had his own high code of honour, and could attack his opponent only when the latter was ready. Social structure in ancient India was to a great extent independent of government. Governments may come and go, but social and village life was not much affected by these changes. It was probably this circumstance that was responsible for the non-inclusion of patriotism among the civic duties, inculcated by the Educational System.

PROMOTION OF SOCIAL EFFICIENCY AND HAPPINESS : The promotion of social efficiency and happiness was the fifth aim of the educational system. It was sought to be realised by the proper training of the rising generation in the different branches of knowledge, professions and industries. Education was not imparted merely for the sake of culture or for the purpose of developing mental and intellectual powers and faculties. Indirectly though effectively, it no doubt promoted these aims, but primarily it was imparted for the purpose of training every individual for the calling which he was expected to follow. Society had accepted the theory of division of work, which was mainly governed in later times by the principle of heredity. Exceptional talent could always select the profession it liked; Brahmanas and Vaishyas as kings and fighters, Kshatriyas and even Shudras as philosophers and religious teachers, make their appearance throughout the Indian history. It was however deemed to be in the interest of the average man that he should follow his family's calling. The educational system sought to qualify the members of the rising generation for their more or less pre-determined spheres of life. Each trade, guild and family trained its children in its own profession. This system may have sacrificed the individual inclinations of a few, but it was undoubtedly in the interest of many. Differentiation of functions and their specialisation in hereditary families naturally heightened the efficiency of trades and professions, and thus contributed to social efficiency. By thus promoting the progress of the different branches of knowledge, arts and professions and by emphasing civic duties and responsibilities on the mind of the rising generation, the educational system contributed materially to the general efficiency and happiness of society.

[25] *Tai. Up.*, I, 11.

Preservation and Spread of Culture: The preservation and spread of national heritage and culture was the sixth and one of the most important aims of the Ancient Indian System of Education. It is well recognised that education is the chief means of social and cultural continuity and that it will fail in its purpose if it did not teach the rising generation to accept and maintain the best traditions of thought and action and transmit the heritage of the past to the future generations. Any one who takes even a cursory view of Hindu writings on the subject is impressed by the deep concern that was felt for the acquisition and preservation of the organised literary, cultural and professional heritage of the race. Members of the professions were to train their children in their own lines, rendering available to the rising generation at the outset of its career all the skill and processes that were acquired after painful efforts of the bygone generations. The services of the whole Aryan community were conscripted for the purpose of the preservation of the Vedic literature. Every Aryan must learn at least a portion of his sacred literary heritage. It was an incumbent duty on the priestly class to commit the whole of the Vedic literature to memory in order to ensure its transmission to unborn generations. It is true that not all the Brahmanas obeyed this injunction, but that was because they had the commonsense to realise that the services of their entire class were not necessary for the task. A section of the Brahmana community however was always available to sacrifice its life and talents in order to ensure the preservation of the sacred texts. Theirs was a life long and almost a tragic devotion to the cause of learning. For, they consented to spend their life in committing to memory what others and they could not interpret. Secular benefits that they could expect were few and not at all commensurate with the labour involved. Remaining sections of the Brahmana community were fostering the studies of the different branches of liberal education, like grammar, literature, poetics, law, philosophy and logic. They were not only preserving the knowledge of the ancients in these branches, but constantly increasing its boundaries by their own contributions, which were being made down to the medieval times. Specialisation became a natural consequence of this tendency and it tended to make education deep rather than broad.

The Theory of Three Debts: The interesting theory of three debts, which has been advocated since the Vedic age, has effectively served the purpose of teaching the rising generation to accept and maintain the best traditions of thought and action of the past generations. The theory maintains that

the moment an individual is born in this world, he incurs three debts, which he can discharge only by performing certain duties.[26] First of all, he owes a debt to gods, and he can liquidate it only by learning how to perform proper sacrifices and by regularly offering them. Religious traditions of the race were thus preserved. Secondly, he owes a debt to the *rishis* or *savants* of the bygone ages and can discharge it only by studying their works and continuing their literary and professional traditions. The rising generation was thus enabled to master and maintain the best literary and professional traditions. The third debt was the debt to the ancestors, which can be repaid only by raising progeny and by imparting proper education to it. Steps were thus taken to see that the rising generation became an efficient torchbearer of the culture and traditions of the past.

OTHER METHODS TO PRESERVE CULTURAL TRADITIONS: The emphasis laid on obedience to parents, respect to elders and teachers and gratitude to *savants* of the bygone ages also helped to preserve the best traditions of the past. Especially significant in this connection are the rules about *svādhyāya* and *rishitarpaṇa;* the former enjoin a daily recapitulation of at least a portion of what was learnt during the student life and the latter require a daily tribute of gratitude to be paid to the literary giants of the past at the time of morning prayers. In later times, when archaic Sanskrit ceased to be understood and abstract and abstruse philosophy failed to appeal to masses, a new type of literature, the Purāṇas, was composed to popularise national culture and traditions among the masses. It was daily expounded to the masses in vernaculars, and as a consequence the best cultural traditions of the past filtered down to and were preserved by even illiterate masses. Devotional literature in Vernacular also served the same function.

CONCLUSION: Body, mind, intellect and spirit constitute a human being; the aims and ideals of ancient Indian education were to promote their simultaneous and harmonious development. Men are social beings; ancient Indian education not only emphasised social duties but also promoted social happiness. No nation can be called educated which cannot preserve and expand its cultural heritage. Our education enabled us to do this for several centuries.

AIMS OF EDUCATION: SOME COMPARATIVE OBSERVATIONS: It would be interesting to compare the aims and ideals of ancient

[26] जायमानो वैं ब्राह्मणस्तृभिर्ऋणैर्ऋणवाञ्जायते ।
यज्ञेन देवेभ्यो ब्रह्मचर्येण ऋषिभ्यः प्रजया पितृभ्यः । *T.S.*, see also *S.Br.*, 1.5.5.

Indian education with those of some other systems, both ancient and modern, both eastern and western. We therefore now proceed to do so. In ANCIENT CHINA, Confucian preached that the purpose of education should be to train each individual in his path of duty, wherein is to be prescribed most minutely every deatil of life's occupations and relationships. If we understand duty in a sufficiently wide sense, this definition of the aim of education would appear to be very similar to that of ancient Indian educationalists. In ANCIENT GREECE AS WELL AS IN REFORMATION EUROPE, the ideal of personal culture loomed large in the educational system. Ancient Indians held that the individual exists more for society than *vice versa;* it was therefore the function of education to acquaint the individual with the culture of the race. Personal culture was promoted by the educational system only to the extent it was possible to do so by imparting national culture. Music, painting and fine arts thus did not become subjects of general education in ancient India as they became in ancient Greece. THE SPARTAN EDUCATION aimed at providing the state with as many faithful and capable soldiers as possible, who would defend it with the armed hand. The existence of the Aryans in India was not a precarious one; they were not like the Spartans threatened with a slave population about ten times their own number; so their education was not naturally dominated by the military ideal.

MEDIEVAL EUROPEAN EDUCATIONALISTS held that education should be for piety and wisdom; some writers like Montaigne also have advocated that it should develope virtue, wisdom, good manners and learning. Ancient Indians agree with this view but add that education must also fit an individual for a useful profession. JESUITICAL EDUCATION aimed at creating an army of faithful and resolute servants of the Catholic Church. Brahmana priests, who controlled and guided education in ancient India did not have so narrow an aim; the youths they trained very often questioned their traditional beliefs and started new theories of religion and philosophy. The system also provided for the needs of the laity. MILTON held that educational system should qualify a youth to perform skilfully, justly and magnanimously all the offices, both private and public, of peace and war. Ancient Indians held that all persons are not versatile enough to be trained for this ideal; they believed in the differentiation of functions and trained different classes for their different duties. SOME MODERN AMERICAN EDUCATIONALISTS hold that moral character and social efficiency, and not mere erudition and culture, should be the aims of education. Ancient Indians

accept this view, but add that the preservation of the ancient national culture, which naturally does not loom large before a young nation like America, must also figure prominently as an aim of education. SOVIET EDUCATION concentrates its activities on the training and upliftment of the proletariate. There was no class war in ancient India; educationalists therefore tried to provide education to each class, suitable for its own needs and traditions. MODERN INDIAN EDUCATION is dominated by the aim of passing examinations with highest honours; this aim was practically non-existent in ancient India. It will be shown in later how examinations played quite a negligible part in ancient Indian education.

SHELLEY AND ITALIAN LITERATURE

A STUDY IN POETICAL DERIVATION

DR. P. N. ROY M.A., D. Litt

Among the modern literatures of Europe, Shelley's first enthusiasm was not for the Italian but for the German literature. HOGG says that when he met Shelley for the first time at Oxford, the poet was a great champion of German culture and literature.[1]

Whether Shelley knew German or not by the time he was at Oxford, is considered to be uncertain. Hogg's statement is contradicted by Medwin, who says that Shelley worked hard at German during his last year at Eton (1809-10) and STOKOE, on the basis of other evidences, is inclined to side with Medwin against the assertion of Hogg.[2]

But there is not much evidence of weight to show that SHELLEY had read Italian literature before 1813. We cannot make much of the fact that there is a poem in the volume *Original Poetry by Victor and Cazire* (1810) which is given as translated from the Italian. There is also in the same volume another poem said to be translated from German, and from the puerile nature of these two compositions, it seems that Stokoe is right in his remark that "Shelley and his collaboratress may have inserted the subtitle as an attractive flourish."[3] Nor can we attach any importance to the presence of Italian elements in the earlier novels of Shelley and to the coining of an Italian word by him in a letter written to Hogg.[4]

On the other hand, there is another evidence which to some extent militates against the year 1813 being put as the earliest date of Shelley's Italian studies. In the latter half of 1812, while Shelley, after his return from Ireland, was living at the beautiful villa residence of Mr. Madock, near Tremadoc in Carnarvonshire, North Wales, he wrote a letter to Clio Rickman (on December 24, 1812), annexing a list of books required by him, in which, among other authors, he mentions the works of Spallanzani. He asks Rickman to send the works of the Italian savant either in an English translation or in the original Italian. If Shelley did not know Italian and if he meant to read the savant's works and not merely to adorn his library, which was not at all SHELLEY'S custom, he should have asked for the

'NOTES' are at the end of this paper, *vide* pages 160-164.

English translation. Not long after, in January 1813, in writing to HOGG, asking him to send one of Kant's works, Shelley says: I have no choice between a Latin, a French, and an English translation. Here he expressly omits to mention the book to be sent in the original, which fact may be interpreted to mean that either he did not know German at the time or his knowledge of it was not yet deep enough to enable him to read and understand it in the original. But in the case of Spallanzani, it is a matter of indifference to him whether he receives the book in the original or in an English garb. One would not be wrong, therefore, to draw from this the inference that Shelley probably had picked up more than a mere smattering of Italian by this time. However, the evidence stands alone, and would not perhaps, by itself, justify us to antedate the poet's Italian studies.

In the spring of 1813 (DOWDEN says, Monday, April 5) Shelley settled in London and met for the first time the Boinvilles, perhaps at the place of Mr. Newton, with whose family he had become acquainted on his short visit to London from Wales the preceding year.[5] Mrs Boinville was the sister of Mrs. Newton. She and her daughter Cornelia were admirers of Italian language and literature and under their influence Shelley also turned his attention to this study. He and Hogg read with them Tasso, Ariosto and Petrarch.[6] But Hogg does not seem to have pulled on well with the Boinvilles, and perhaps there was soon a break in the Italian study of the two friends.[7]

In the solitude of Bracknell, where Shelley had retired in August, 1813, he resumed his Italian studies, but this time not with the imaginative works of the Italian poets, but with a book of a sociological nature, *Dei Delitti e Pene* by Cesare BECCARIA. To Hogg he writes from Bracknell on March, 16, 1814: "I have begun to learn Italian again. I am reading Beccaria's *Dei Delitti e Pene*. His essay seems to contain some excellent remarks, though I do not think that it deserves the reputation it has gained. Cornelia assists me in this language."[8] In 1814 we also find him reading the works of Alfieri and his autobiography.[9]

Hogg says that Shelley's connection with his friends at Bracknell had much influenced his subsequent conduct. A recent biographer and critic of the poet goes so far as to say that "these people obviously began the salvation of the poet" because they had opened the gates of romance to him, and where had reigned before the leaden skies of *Political Justice* and *Le Système de la Nature*, now reigned, through them, the

crimson dawn of the poetry of TASSO, ARIOSTO and PETRARCH.[10] Shelley, of course, afterwards spoke highly of Mrs. BOINVILLE and her daughter.[11] But in the poems of the period there does not seem to exist any trace of the influence of these new studies. A progress Shelley has certainly made in these poems. Most of the poems after *Queen Mab*, from 1813 on, gain suddenly in harmony and melody, as Kurtz points out,[12] but this development is due to his study of Wordsworth and Coleridge and a deeper experience of life. So long it was enthusiasm for humanity which moved the poetic being of Shelley, but now he was to know a sorrow, a deep sorrow, the sorrow of having known and lost his wife's love, and the new blossom of poetry springs and derives its strength and appeal from this. Peacock, who knew Shelley at Bracknell and speaks of the books and authors that influenced him most, mentions Brown's novels, Schiller's *The Robbers*, Goethe's *Faust*, the great classical poets, Shakespeare, Milton, Wordsworth, Coleridge and Southey. About Wordsworth and SOUTHEY PEACOCK says that these had great influence on his style, and Coleridge especially on his imagination, but he says nothing about the Italian poets. Nor do we find any enthusiastic reference to TASSO, ARIOSTO and PETRARCH in his published correspondence of the period (though it must be admitted that there is a gap in his published correspondence between 1813 and 1814). In Shelley's next long poem, *Alastor*, which was written in 1815, it is not the influence of the Italian poets that we detect, but of Goethe's *Faust* which he had read that year, and of Wordsworth, Southey, Coleridge, Delille, Volney.[13] If the poetry of Tasso, Ariosto, and Petrarch had really been like a dawn to Shelley, it should have left at least some influence on his poems. What seems probable is that Shelley admired these poets, but they did not yet form an essential part of his creative being.

Of the three poets, it was Ariosto who seems to have been the greater favourite of Shelley, if we are to believe Hogg's testimony. It was but natural that Shelley, who in his early life took delight in romance (though they were mostly *schauerroman*, but not infrequently also eastern tales of adventure), should have a special feeling for the poetry of this singer of knights and ladies and of love and adventure. Hogg writes : "Bysshe soon discovered that the realms of romance and the intercourse of Paladin were his proper and peculiar element." Hogg also suggests another reason for Shelley's preference for Ariosto—his easy flowing style which presented fewer difficulties than the ebaborate stanzas of Tasso.[14] He read his poem repeatedly, and continued to read it for some

time to come. Between 1815 and 1818, when Shelley was living at London and Bishopsgate, Clara was his companion in Italian studies and we find in Mary's journal entries like—"Shelley and Clara read *Pastor Fido*" "Shelley and Clara begin *Orlando Furioso*."[15] But his early enthusiasm gradually changed into a dislike for the poet. In May, 1818, when the poet was at Leghorn, he and Mary again read Ariosto together, and continued their study a few months later at the Baths of Lucca,[16] but the one-time fascination is now gone. Ariosto is now found by Shelley to be only sometimes a poet. "We have almost finished Ariosto", he writes to the Gisbornes from Bagni di Lucca, (July 10, 1818), "who is entertaining and graceful, and sometimes a poet. Forgive me, worshippers of a more equal and tolerant divinity in poetry, if Ariosto pleases me less than you. Where is the gentle seriousness, the delicate sensibility, the calm and sustained energy, without which true greatness cannot be ? He is so cruel, too, in his descriptions ; his most prized virtues are vices almost without disguise. He constantly vindicates and embellishes revenge in its grossest form ; the most deadly superstition that ever infested the world. How different from the tender and solemn enthusiasm of Petrarch or even the delicate moral sensibility of Tasso, though somewhat obscured by an assumed and artificial style."

Four months later, (November, 1818), while he was on his way from Este, via Florence, to Rome and Naples, he halted for some time at Ferrara and saw the relics of Ariosto and Tasso in the magnificent public library of the place. The manuscript of the satires of Ariosto, preserved in the library, and written in "a small, firm, and pointed character", seemed to express to him "a strong and keen, but circumscribed energy of mind", whereas "that of Tasso is large, free and flowing, except that there is a checked expression in the midst of its flow, which brings the letters into a smaller compass than one expected from the beginning of the word. It is the symbol of an intense and earnest mind, exceeding at times its own depth......"[17]

There are also some references to Ariosto in Shelley's *A Defence of Poetry*. They are also not quite complementary. For example, he says that the title epic cannot, in the highest sense, be given to *Orlando Furioso*.

Shelley's judgments upon Ariosto are perhaps a little too harsh and no Italian would perhaps acquiesce in them. It is the very qualities of gentle seriousness, delicate sensibility and

calm and sustained energy, found to be wanting in Ariosto by Shelley, that are prized so highly in him by his own nationals. An unperturbable serenity of outlook on life, a true sense of its comedy and tragedy, a delicate perception of the tender and the beautiful, a balanced weighing of the pros and cons of existence, these are some of the qualities that are appreciated by every Italian in Ariosto. He is regarded to be the true representative of the spirit of the late Renaissance ; an impeccable artist who created forms and visions of beauty embodying the aesthetic ideal of his age.

Shelley evidently judged Ariosto by those elements of his poetry where real Ariosto is not. There are two worlds in the epic of Ariosto—the one is of battles and ferocious duels, resounding with the clang of swords, the world of adventurous knights and mighty enterprises, full of excitement and tumult; i.e. the entire world of Christian chivalry. This world he makes his own by the projection of his personality as an artist, but he observes and describes it with the interest of an appreciative spectator who delights to report the spectacle in all its details, without tinging them with his own emotion. He is within the chivalrous world and yet without it. He entered into this world and looked at the doings of his paladins *con occhio di birichino* as the late Prof. Rossi said.[18]

The other world is quite the reverse of this. Here, instead of the clash of sword, we have the "whispers of love," instead of the tumult of the battlefield, we have the idyllic beauty, all depicted by the poet with an exquisite sensibility and delicacy of touch. Here comes out the poet as we know him from his biography, a soft and serene spirit responsive to tender sentiments of love and friendship, of which he has given us the sweetest pictures. His was a nature that loved domestic peace and sought quiet and preferred to meet life with the gentle smile of an easy-going person. Gentle and easy-going, that is what Ariosto is, and serene in his soul, serene like the sky of his native land. This gentleness of spirit pervades his poetry and takes away the sting even from his satires in which he deplores the vices of his contemporaries. Shelley's judgment was due to his not having perceived this distinction between the two worlds of Ariosto's poetry and the true nature of the poet.

As regards the direct influence of the poetry of Ariosto upon that of Shelley, we detect nothing but just a few traces which may also be of doubtful import. Knowing as we do his estimation of the Italian poet we cannot expect otherwise.

We give below a few instances where Shelley seems to have been influenced by Ariostean phraseology and imagery.

My spirit like a charméd bark doth swim
Upon the *liquid waves* of thy sweet singing.
(Shelley, *Fragment to One Singing*)
Ecco non lungi un bel cespuglio vede
Di spir fioriti e di vermiglie rose,
Che de le *liquide onde* al specchio sede.
(*Or. Fur.*, Cant. I, st. 37, 13)
Liquid marble of the windless lake
(Shelley, *Rosalind and Helen*, 1252)
Sopra quel chiaro e *liquido cristallo*
(*Or. Fur.*, Cant II, 35)
Like a *cloud big with May shower.*
(Shelley, *Magnetic Lady* IV, 1)

Aristo has Nube di pioggia e tempesta pregna.
(Could pregnant with rain and tempest)

We also find a similar idea in Fabrio Flaceo's *Argonaut* from where it was taken by Ariosto and in Homer, *Illiad*, XVI, 364-5.

Amid enchanted mountains, and *the caves of divine sleep*,
(*Epipsychidion*, 195)
Then call your sister from *Oblivion's cave.*
(*Epipsychidon*, 595)

"The caves of divine sleep" and "Oblivion's cave" may have been suggested to Shelley by Ariosto's description of the Cave of Sleep (*Or. Fur.*, C. XIV, 93) at the gate of which stands *Lo smemorato oblio* (forgetful Oblivion).

When from the *moist moon* rains
The inmost shower of its white fire.
(*Letter to Maria Gisborne*, 69)

F. S. Ellis (*Concordance to Poetical Works of P. B. Shelley*) gives *moist* here the meaning of cold. A better interpretation is to regard the moon moist, because when it shines, dew falls. We find a similar expression in Ariosto.

ch'*alla luna*
Può d'appresso asciugar *l'umido seno.*
(*Or. Fur.* Canto XIV, 1 133)

Alla luna l'umido seno means the moist bosom of the moon.

Whose roof of moonstone carved, did keep
A glimmering over the forms on every side,

Sculptures like life and thought; immoveable, deep-eyed.
(*The Revolt of Islam.* Canto LI, I)

In the preface to the *Revolt of Islam* Shelley writes that he has drawn the materials for the imagery of his poem from the poetry of ancient Greece and Rome and modern Italy. Among the Italian poets no one made a greater use of architectural and sculptural motives than Ariosto. He has many a splendid description of architecture in *Orlando Furioso,* such as the painted hall in the rock of Tristan, the hall of the host of Rinaldo and that of Cassandra, as also the *sala per incanto istoriata* shown by Merlin to Re Fieramonte. Shelley may have derived the suggestion for his description of the temple in Canto I of *The Revolt of Islam* (LI, LII, LIII, LIV) from the verses of the Italian poet. We may particularly compare the lines quoted above with Ariosto's

D'intorno cinta di bel marmo fino
Lucido e terso, e biancho piú che latte,
Quivi d'intaglio con lavor divino
Avea Merlino imagini ritratte :
Direste che *spiravano, e, se prive*
Non fossero di voce, ch'eran vive.
(*Or. Fur.* XXVI, 30)

(You would say that the forms were breathing, if not deprived of voice, that they were alive).

We also find in Dante

Dinanzi a noi pareva si verace
Quivi intagliato in un atto soave,
Che non sembiava imagine che tace. (*Purg.* X, 37-39)
(so sculptured to the life
He looked no silent image).

Shelley's interest in Tasso was at first for his poetry, though he met with difficulties in the Italian poet's language. He was the author with whom, as we have seen, Shelley began his study of Italian poetry in 1813 and Tasso's name again appears in the list of authors read by him in 1816.[19] But in the course of time the interest passed from Tasso's poetry to his life. Medwin says that Shelley deemed his style often stilted and full of conceits and that he had seen Mrs. Shelley read him to sleep over the *Gerusalemme Liberata.*[20] But the sad incidents of Tasso's life, the gradual beclouding of his noble intellect, his ultimate madness, his gloomy days in prison, his flight, his wandering about like a mendicant up and down the country, all these excited the sympathy of Shelley and soon after his arrival in Italy we find him engaged in reading Tasso's

biography in order to make a drama out of it. On April 11, 1818, Mary Shelley enters in her journal—Shelley has finished the *Life of Tasso* and reads Dante. It was probably the same *Life of Tasso* by Manso which he afterwards read at Leghorn, and Shelley writes to a friend (probably Horace Smith) from Milan on April 30, 1818: "I have been studying the history of Tasso's life, with some idea of making a drama of his adventures and misfortunes. Such a subject would suit English poetry." But the drama was never written and only a fragment and a song remains of the project.[21] We are ignorant of the reasons why Shelley abandoned his plan. According to Richard Garnett, he perhaps gave up the attempt at the appearance of Byron's *Lament of Tasso* because he did not want to enter into competition with the elder poet.[22] But Shelley intended to write a drama and Byron wrote a poem. How could there be any competition between the two? We might, on the other hand, have plausibly supposed a reluctance for competition with Goethe's *Tasso*, had we only known that Shelley was aware of or acquainted with that drama. But there is no such evidence. Mrs. Shelley says that on his arrival in Italy, Shelley also meditated upon writing two other dramas, one on the *Book of Job* and the other on the myth of *Prometheus*. It may be that Shelley's thoughts gradually turned from Tasso to these subjects, particularly the latter. Any way, the drama was not written, but Dowden thinks that some of Shelley's studies for the madness of Tasso perhaps passed into the soliloquies of the lover and lunatic in *Julian and Maddalo*.[23]

Inspite of Medwin's statement that Shelley considered Tasso "often stilted and full of conceits", there is no doubt that he was quite indulgent towards the Italian poet and he explained away the stilted style as an effect of the literary fashion of the time. We have also seen him passing verdict in favour of Tasso when he was examining some manuscripts of Tasso and Ariosto in the public library at Ferrara. But we do not come across any noteworthy influence of Tasso's poetry upon that of Shelley.

Petrarch was the third poet read by Shelley with the Boinvilles. Hogg gives us an interesting account of their initiation into the mysteries of the amatory verses of the great poet of love. We are told that the lady from whom the two friends took their lessons in Italian, invariably began her day by reading a sonnet or a canzone of Petrarch and we are further informed that she seemed disposed to recommend that by legislative enactment all loyal subjects should be enjoined and required to begin in this manner every day of their lives.

Petrarch was a hero for her and Laura the happiest of women and Shelley is said to have entered at once into her views. But Hogg used to mock at her enthusiams and cast doubt upon the Platonic character of Petrarch's love because he was a good eater and drinker and had a young housekeeper. Shelley was at first shocked to learn this, but afterwards he put up a defence by saying that in the course of Platonic attachment of forty years, a little of such consolation was not unnatural. Shelley also, according to Hogg, detected traces of sensuality in the many engravings of the poet made after his portrait by Giotto. He disliked the expression, and often found fault with it, insisting either that it could not be a faithful likeness, or that the subject of the picture was not what he is generally believed to have been.[24]

Shelley's study of Petrarch did not bear any immediate fruit in his poetry, and though there can be no doubt that this interest in him remained unabated till the end of his life, his published correspondence contains but very few references to his reading of and opinion about Petrarch's poetry. But Medwin, when he joined Shelley in Italy, found that he preferred Petrarch to any other Italian poet (but Medwin does not say if he was preferred even to Dante) and had his works constantly in his hands. His favourite poem was Petrarch's great ode to Italy, *Italia mia*, which he used to recite frequently. In a letter to the Gisbornes quoted before, in which he speaks of the poetry of Ariosto, he also speaks of the "tender and solemn enthusiasm of Petrarch". There are also appreciatory references to the poetry of Petrarch in *Essay on the Literature, Arts and Manners of the Athenians, A Defence of Poetry*, and *The Revival of Literature*. The particular poems through whicn the influence of Petrarch passed into Shelley's poetry were the *Trionfi*[25] which he must have read deeply, if not earlier, at least in 1822, when he composed his own *Triumph of Life*. He has taken much in respect of the general outline and metre of the poem from Petrarch. Prof. Bradley has given us two studies in which he has traced in detail the influence of Petrarch's poem on that of Shelley. We are tracing below some of the more arresting points of contact between the two works.

The influence is first of all found in the general features. Like Petrarch, one fine spring morning the poet falls asleep on the grass and has a trance in which he sees a crowd, hastening none knew whither. Then the triumphal car of life appears with captives bound to the chariot. The car motive is a favourite one of Shelley and appears as early as 1813 in *Queen Mab*[26], but there is no doubt that in this poem it

was taken from Petrarch. And the thoughts of the two poets also turn at once to the Romam triumphal cars. And just as Petrarch asks about the pageantry seen by him:

Dimmi per cortesia, che gente è questa? and gets the reply;

Questo per amar s'aquista

so also Shelley, viewing the pageantry, asks:

And what is this?

Whose shape is that within the car?

and a voice answers: Life.

Even the figure of Rousseau functions in the poem like Laura in Petrarch and Virgil in Dante.

As regards the more detailed phraseological and ideational coincidence, we desire to draw attention to the following.

The beginning lines of the poem

Swift as a spirit hastening to his task
Of glory and of good, the sun sprang forth
Rejoicing in his splendour...

bear an echo of the Petrarchan lines in the *Trionfo del Tempo*:

poichè questo ebbe detto disdegnando
riprese il corso, *più veloce assai*
che falcon d'alto a sua preda volando.

The idea of velocity is present in both the poets. In Shelley the sun hastens with the swiftness of a spirit; in Petrarch with greater velocity than that of a falcon swooping down upon its prey.

Again, the idea of the sun directing all human labour in the lines:

all things....
Rise as the sun their father rose to bear
Their portion of the toil, which he of old
Took as his own, and then imposed on them:

finds a resemblance with the idea contained in the following lines of Petrarch in *Trionfo della Divinità*:

........il sol........
per lo cui variar nostro lavoro
or nasce, or more, ed ora scema, or cresce.

In the "public way" of Shelley (*l* 43) we find a verbatim translation of Petrarch's "pubblico viaggio"; so also in "vain toil" (l 66) Petrarch's "inutile fatica".

m

In

I heard alone on the air's soft stream
The music of their ever-moving wings

there is a reminiscence of Petrarch's "suon delle purpuree penne".

Another of Petrarch's famous line:

Gente a cui fa notte innanzi sera
(People whom night overtakes before evening)

has left its mark upon Shelley's

Caught them ere evening deep night (ll 214-15)

and also on

bringing, ere evening,
Strange night upon some Indian isle ;-
(*ll* 485-86)

In the *Lines written among the Euganean Hills* there is a reference to Petrarch.

As the love from Petrarch's urn,
Yet amid yon hills doth burn,
A quenchless lamp by which the heart
Sees things unearthly ;- (*ll* 200-203)

We feel strongly tempted to think that the memory of Petrarch here brought also the memory of some Petrarchan lines to Shelley's mind. Shelley speaks of love as a lamp making the heart see unearthly things. Did he remember the following lines of Petrarch where the poet speaks of the eyes of his beloved as a sweet lamp that illumines for him the way to heaven ?

Gentil mia donna, i'veggio
Nel mover de'vostr' occhi *un dolce lume*
Che mi mostra la via ch' al cielo conduce;
(a sweet lamp
which shows me the way that leads to Heaven)

It seems to us that Petrarchan memory also operated in Shelley's famous line in *To a Skylark:*

Our sincerest laughter
With some pain is fraught;

Our sweetest songs are those that tell of saddest thought.

The first two lines remind one very forcibly of Petrarch's
L'estremo del riso assaglia il pianto
(Tears assail the height of laughter).

But as Shelley had already read Boccaccio enthusiastically a few months before the composition of the poem, Boccaccio's line in the introducation to the *Decamerone*, closely similar in idea to that of Petrarch, may also have recurred to his mind. The line is

L'estremità dell' allegrezza il dolore occupa
(Sorrow sits at the top of joy).

In *The Cenci* (I, 1, 38) the "venerable hairs" in "Thro' those snow-white and venerable hairs" reminds one of the "venerabil chioma" of Dante and Petrarch. So also

The extreme hope, the loveliest and the last
(Adonis, VI. 6)

and

Invisible Corruption waits to trace his
extreme way (Adonais, VIII. 5)

recalls to mind the use of "extreme" by Dante and Petrach e.g. in l'ora estrema, gli estremi giorni etc.

The study of Dante was at first put off by Shelley and Hogg on account of the abstruseness of meaning.[27] It is not known when Shelley exactly began his study of Dante, but when the *Alastor* volume of his poetry was published, it contained a translation of a sonnet of Dante, the one which Dante addressed to Guido Cavalcanti.[28] But his published correspondence upto the date of the publication of *Alastor* is silent about his interest in Dante. It is only in 1817 that we find a reference to the great Italian poet in a letter written by Shelley from Marlow (Dec. 7) to Charles Ollier in London, requesting him to send, if possible by return of coach, the *Purgatorio* and *Paradiso* of Dante, in English and Italian, by Carey (sic). From this it may be legitimately inferred that he had perhaps already read the *Inferno* and some of the minor works of Dante. An evidence of this study is seen in the poem *Prince Athanase*, written in 1817, the technique of which is based upon the *terza rima* of Dante. The next reference to Dante occurs in a letter written by Shelley from Milan to Peacock on April 20, 1818, i. e. four months after his order for Dante to Ollier, in which he says that he has selected "a solitary spot among the aisles, behind the altar" of the Milan cathedral, where, in the light of day dimmed by the storied window, he reads Dante. Mary Shelley also records (in her diary of the time) Shelley's reading of Dante during the first days of their arrival in Italy. He read him during their sojourn at Como and before he left Milan he had finished *Purgatorio* and begun *Paradiso*. But this interest in Dante

seems to have soon somewhat waned, due perhaps to his other literary pre-occupations and specially due to his study of the Greek classics. On July 25, 1818, Shelley writes to Peacock from Bagni di Lucca : "I have lately found myself totally incapable of original composition......translating the *Symposium*. I have been reading scarcely anything but Greek and a little Italian poetry with Mary." The little Italian poetry that he read with Mary was that of Ariosto. It is only in 1819 that we find him again reading Dante with Mary. In another letter to Peacock from Leghorn on August 22 (?) 1819 he gives his daily routine : "My employments are these : I awaken usually at seven ; read half an hour ; then get up ; breakfast ; after breakfast ascend my tower ; and read or write until two. Then we dine. After dinner I read Dante with Mary." The Shelleys had lost their child not long before at Rome and Dowden says that Shelley now read two cantos of *Purgatorio* daily with Mary in order to divert her mind from her recent sorrow.[29] But about this time Shelley also began to study Spanish and for some time he was mostly absorbed in the study of that language and the Greek classics.[30] But when about this time Shelley met "the only Italian for whom he ever felt any interest", i.e. Emilia Viviani, the lovely and interesting girl who was the inspiration of the *Epipsychidion*, his thoughts turned once more to Dante and Mary Shelley writes in her journal of January 31, 1821 : "Call on Emilia Viviani. Shelley reads the *Vita Nuova* aloud to me in the evening."[31] Toward the end of 1820 Thomas Medwin, a cousin of Shelley, was also with him in Italy and he says that at Pisa he used to read Dante to Shelley who "lamented that no adequate translation existed of the *Divina Comedia* (sic) and though he thought highly of Carey's (sic) work, with which he said he had for the first time studied the original, praising the fidelity of the version, it by no means satisfied him. What he meant by an adequate translation, was, one in *terza rima*."[32] Medwin asked Shelley if he had attempted to translate Dante in *terza rima*, whereupon he searched among his papers and showed him a translation of the beginning of Canto 28 of *Purgatorio*. Shelley's Pisan circle also included an Irishman, Count Taffe, who was interested in Dante and had translated a part of the *Divine Comedy* in octosyllabic *terza rima* with necessary comments. Shelley read the translation and the comments and it was through his good offices that the book was published in 1822 by Murray. In June, 1821, writing to Ollier in connection with its publication in England, Shelley wrote : "The most considerable portion of this work will consist of the "comment." I have read with much attention this portion, as

well as the verses upto the end of the eighth canto; and I do not hesitate to assure you that the lights which the annotator's labours have thrown on the obscurer parts of the text are such as all foreigners and most Italians would derive an immense additional knowledge of Dante from."

Shelley considered Dante as one of the greatest poets of all ages, though Medwin says that the reading of Dante produced despair in him.[33] Medwin does not explain as to why Shelley should feel despair at reading Dante but elsewhere[34] he makes another statement from which we learn that the more Shelley read Dante, the more he admired him. Of course, in his *Essay on the Literature, the Arts, and the Manners of the Athenians*, he considered the *Divine Comedy* to be a misty and extravagant fiction, and found the "loveliness of its poetry gathered in its fortunate isles, laden with golden fruit." But said he, Medwin informs us, "remember the time in which he wrote. He was a giant....Read the *Paradiso* and parts of the *Purgatory*, especially the meeting with Matilda." By the time he wrote the *Defence of Poetry*, Shelley's attitude towards Dante underwent further modifications and he had now nothing but unqualified praise for him. In it he considers Dante as a philosopher of the very loftiest power, and second only to Homer as an epic poet. The *Vita Nuova* is "an inexhaustible fountain of purity of sentiment and language" and its author is a bridge thrown across the stream of time, uniting the ancient and modern worlds.

Of Dante's influence on Shelley's poetry, there are many traces. We have already mentioned his translation of Dante's sonnet to Cavalcanti in the *Alastor* volume. He translated several other pieces from Dante (the first canzone of the *Convito*, the Ugolino episode in *Purgatorio*, a fragment adapted from the *Vita Nuova*), but the first direct influence of the study of Dante is to be found in the verse technique of the poem *Prince Athanase*, written at Marlow in 1817.[35] The content of the poem is a search by Prince Athanase of the ideal woman of heavenly love, his meeting with the woman whom he considers to be the ideal one but who at the end proves to be the false woman of earthly love, his disillusionment and death and the finding of his soul's companion at death-bed. This story has been versified in that most difficult of the stanza-forms, the *terza rima*, of which Dante is the supreme master. Medwin avers that Shelley tried originally to write the *Revolt of Islam* (at first called *Laon and Cythna*) in the *terza rima*, and that he abandoned the metre as too monotonous and artificial.[36] To us it seems that if Shelley had really tried to write the *Revolt of Islam*

in *terza rima* and gave up the attempt, it was perhaps not because he found the metre monotonous and artificial, but because he had not yet mastered it, otherwise why should he again return to the experiment with an artificial metre in *Prince Athanase* and later in *The woodman and the Nightingale, Ode to the Westwind* and the *Triumph of Life* ? And to a complete mastery of the *terza rima* Shelley never attained. He handled it with such considerable beauty in the *Triumph of Life* that an eminent English critic thought that "he might have been an ideal translator of the *Paradiso*, if he only mastered the metre as Dante understood it".[37] But the secret of the *terza rima* escaped him. Or perhaps he understood it, but introduced modifications in order to adapt the metre to his own genius. Shelley did with the *terza rima*, what Shakespeare had done with the sonnet. The great Elizabethan poet adhered only to the required number of lines, but rejected or modified the severe rhyme-arrangement of the Italian sonnet. Shelley adheres to the rhyme-arrangement, but modifies the restraints of the Dantesque tercet. These modifications remove the Shelleyan *terza rima* very far from that of the master of the Italian singers. In Dante, the stop at the end of the tercet is an all important thing. It rounds off not only the verse, but also the idea contained. The tercets, interlinked by means of rhyme but not of idea, thus possess a separate perfectness of their own and produce the effect of a string of crystals reflecting the varied beauty of the poet's phantasy from their myriad surfaces, or, if I may express it otherwise, Dante's tercets have the separateness and connection of dance-steps. Shelley, on the contrary, takes absolute liberty with the end-stop and makes not only his verses but his ideas interfluous. The stop comes anywhere in any line and at long intervals. Sometimes it occurs at the end of three or four tercets. The idea is drawn out from tercet to tercet by means of prolix qualifying words like a malleable and ductile wire. In fact, as Robert Bridges very judiciously remarks, "our poets composed their *terza rima* continuously, as they should have printed it and printed it in stanza, as they should have composed it."[38] The effect is lack of crispness and excessive diffusion.

In the preface to *The Revolt of Islam* Shelley indicated the sources from which he had gathered materials for the imagery of this poem. There are in the poem lines of Dantesque intensity and reminiscence. Todhunter found this intensity in the following lines.[39]

> Thus the dark tale which history doth unfold
> I knew, but not methinks, as others know,
> *For they weep not.* (Canto i,xxxviii)

or in these :

Thou fear'st not then the serpent on thy heart ?
"Fear it !" she said, with brief and passionate cry
And spake no more. (Canto i,xlvii)

We find Dantesque reminiscence in the following lines :

So from that chasm of light in a winged Form
On all the winds of heaven approaching ever
Floated, dilating as it came : (Canto i,vii)

This is like the appearance of God's Angel whom Dante and Virgil saw in the second canto of *Purgatorio* between the distant shores with no other means except his wings and gradually growing in size and brightness.

Un lume per lo mar venir si ratto,
Che'l mover suo nessun volar pareggia.
....
rividil più lucente e maggior fatto. (*Purg.* ii, 17-21)[40]

Dantesque reminiscence is also detectable in the description of the boat in which the poet makes his voyage with the woman to the "Temple of the Spirit". It is

A boat of rare device, which had no sail
But its own curved prow of thin moonstone,
Wrought like a web of texture fine and frail,
To catch those gentlest winds which are not known
To breathe, but by the steady speed alone
With which it cleaves the sparkling sea.
(Canto I,xxiii)

e quei sen venne a riva
con un vasello snelletto e leggiero,
tanto che l'acqua nulla' nghiottiva.
(*Purg.* II,40-42)[41]

The boat-motif is common in Shelley. He was always fond of boat and water. While in England, he used to undertake excursions in boat in the woods of Bisham and in Italy his passion for boating not only led him to row on the waters of the Arno and the Serchio but ultimately brought about his death. The motif has been utilized in the poem *Alastor* in which the hero, after much wandering, comes upon the Chorasmian shore and sights a little shallop which he embarks to "meet lone Death on the drear ocean's waste."

Following his eager soul, the wanderer
Leaped in the boat, he spread his cloak aloft

On the bare mast, and took his lonely seat,
And felt the boat speed o'er the tranquil sea
Like a torn cloud before the hurricane.

This is an ordinary boat as a human hand would make. There is nothing supernatural in it. It had been long abandoned, had many a rift in its sides and its frail joints swayed with the undulations of the tide. It had a mast and it was moved from the shore by spreading a cloak aloft. But the boat in the *Revolt of Islam* is a thing of rare device which has no sail and needs no sail. It is a boat with a "prow of thin moonstone, wrought like a web of texture fine and frail" which catches the gentlest winds generated by the speed alone of the boat. The same motif and the same type of enchanted boat again appears in *The witch of Atlas* who had a pinnace which she

moored upon her fount, and lit
A living spirit within all its frame,
Breathing the soul of swiftness into it.

With this boat the wizard lady used to make voyages over the most fantastic regions that are without geographical parallels and it would move up a stream "like a star up the torrent of night," "oared by the enchanted wings" of Hermophroditus. All this reminds us of the magic boat of the second canto of *Purgatorio* which had no oars nor sail, and which sped over the seas hardly touching the waves, piloted by the Angel of God with his wings. The second canto of *Purgatorio* was a specially favoured piece with Shelley and we feel no hesitation in stating that he remembered Dante's magic boat in conceiving his own enchanted ones. The boat-motif occurs again in the *Prometheus Unbound* and *Epipsychidion*. In *Prometheus Unbound* (act. ii,v) Asia compares her soul to a boat.

My soul is an enchanted boat
Which, like a sleeping swan, doth float
Upon the silver waves of thy sweet singing,
And thine doth like an angel sit
Beside a helm, conducting it
Whilst all the winds with melody are ringing.

Here also an enchanted boat piloted by an angel as in Dante. The boat-motif in *Epipsychidion* has been discussed in our study of the poem.

In *Rosalind and Helen* Dante's influence is detectable in two places—firstly, in "I feel desire, but hope not" (l.772)

which expression is also used by the afflicted spirits of the *Inferno* in canto iv. "E senza speme vivemo in disio" they say.[42] The second place is where the "ministers of misrule" seize Lionel and say that "his soul must roasted be in hell's red lakes."

In *Julian and Maddalo* the lines

The clap of tortured hands,
Fierce yells and howlings and lamentations keen,
And laughter where complaint had merrier been,
Moans, shrieks, and curses, and blaspheming prayers
Accosted us.

are comparable to and undoubtedly suggested by the description of the tumult of mixed languages and sounds which Dante heard in the third canto of *Inferno*.[43]

In the preface to his lyrical drama *Prometheus Unbound* Shelley writes: "The imagery which I have employed will be found, in many instances, to have been drawn from the operations of the human mind, or from those external actions by which they are expressed." There are deep influences, in the make-up of this poem, of the forms of beauty and of landscape charms seen and enjoyed by Shelley during his sojourn in Rome. The memories of Roman ruins and fountains, of architectural shapes and sculptured figures, of paintings and landscapes, recur frequently in it. And there is also no lack of traces of the influence of Dante. But this influence is more impalpable here than we have hitherto seen, though there are also some examples of direct borrowing. One such example is found in the words uttered by Ione towards the end of the first act:

Behold'st thou not two shapes from the east and west
Come, as two doves to one beloved nest,
Twin nurslings of the all-sustaining air
On swift still wings glide down the atmosphere?

Whoever has read the famous fifth canto of *Inferno*, can easily trace these lines back to their source.

Another example occurs in the beginning of the second act, where beautiful Asia, standing in a lovely vale in the Indian Cauçasus, welcomes spring and says

As suddenly
Thou comest as the memory of a dream,
Which now is sad because it hath been sweet;

Again a fine echo of the fine lines of Dante:

Nessum maggior dolore
Che ricordarsi del tempo felice
Nella miseria; (*Inf*. v. 21-23)

n

In the first act, when the benign spirits, "gentle guides and guardians" of humanity appear, Panthea draws the attention of the Earth and says:

> Look, sister, where a troop of spirits gather,
> Like flocks of clouds in spring's delightful weather,
> Thronging in the blue air.

These lines seem to be based upon Dante's "una gente d'anime" (a troop of spirits) to whom the attention of Virgil was drawn by him in the third canto of *Purgatorio*.

In the beginning of scene v, act iii, the spirit says that the flight of his coursers must be swifter than fire, and they shall drink the hot speed of desire. "The hot speed of desire" is an echo of Dante's

> ma qui convien ch'om voli;
> dico *con l'ale snelle e con le piume*
> *del gran disio,*
> (But here a man has need to fly, I mean
> With the swift wing and plumes of high desire)
> (*Purg*. iv, 27-29)

But the chief influence of Dante on this poem is, as has already been said, more intangible. It is to be found in the atmosphere the poet has created, especially in the atmosphere of light and love and music. Of the three parts of the *Divina Commedia,* it is the last part, i.e. *Paradiso,* the influence of which is most dominant upon it. Shelley's appreciation of the poem of Dante shows a gradual progress which is keeping with the gradual development of his mind. His appreciation was the highest for *Inferno* in the beginning, but with the growth of his spiritual life and the deepening of his experiences, he began to value the high quality of the poetry of *Purgatorio* and *Paradiso,* which were at first considered by him to be dull and insipid. He was deeply enamoured of the second and the twenty-eighth canto of *Purgatorio,* and praised *Paradiso* as containing the most glowing images of modern poetry and "a perfect hymn of everlasting love."

No poets have ever sung of the poetry of light with greater effect than Dante and Shelley. And nowhere is this felt with greater profundity than in *Prometheus Unbound* and *Paradiso.* A comparison brings out the affinities between the two. In *Paradiso* everything is irradiation. All the creatures that move and have their being there, exist in and for light. They are translucent and beamy; bodiless beings that manifest themselves as flames, as sparks, as luminous trails. They glow,

they only shine, they reveal their presence by streaming forth effulgence. In order to express this luminous nature of Paradise the poet takes recourse to various artifices of language. Sometimes it is a splendid shape, burning with light, sometimes it is thousand splendours moving forward, sometimes the spirits are said to glitter like the·choicest ruby stricken by the sun, sometimes they are described as a lustre like the brightening up of the horizon or lights scintillating like atomies of bodies moving along a sunbeam. At times the poet addresses the spirits as blessed flames, at times as a living topaz. In the twenty-first canto, when the poet sees the spirits come down the ladder, he says that he saw splendours descending in such multitude, that every light in heaven was shed from thence.

But the confines of Paradise are light and love and its spirit-inhabitants not only constantly radiate light, but they always live in love and joy. They are "ben creato" (born for joy) as the poet says in the third canto of *Paradiso*, and whenever their joy is augmented, they glow with greater light. That is the characteristic way by which they express their state of felicity. Per letiziar la su fulgor s'acquista (In that upper clime, effulgence comes of gladness) (*Par.* c. ix, 70). And the joy is maddening, unsatiating. Winged with this innate joy, the spirits fly around. Sometimes the poet sees them circling round and round like a wheel, sometimes like cranes disposing themselves in the shape of letters D, I, and L (*Par.* xviii), sometimes they arrange their steps as in dance, and sometimes they hover like a troop of bees around a flower. As he sees them dance or fly and hears them sing, he is over-powered with such sweetness that everything there appears to him one universal smile (un riso dell' universo) and he bursts out

Oh gioia! oh ineffabile allegrezza!
oh vita integra d'amore e di pace!
oh sanza brama sicura ricchezza!
(Joy past compare; gladness unutterable;
Imperishable life of peace and love;
Exhaustless riches, and unmeasured bliss).

Whoever will remember these aspects of Dante's *Paradiso* cannot fail to discover the spots where its influence is felt in *Prometheus Unbound.* It may be said that the luminousness of *Paradiso,* its splendour, its radiant atmosphere, as also its sense of maddening joy and extasy, recurs more than once in Shelley's poem. The songs, for example, which the spirits sing and the sentiment of gladness that animates them, the light that issues forth from Asia as she undergoes gradual transforma-

tion, the wildernesses "peopled by shapes too bright to see", "the mystic measure of music and dance and shades of light", "an ocean of splendour and harmony", "Paradise of golden light" "vast beams like spokes of some invisible wheel," are all reminiscent of *Paradiso*. When Panthea says to Asia

> How thou art changed! I dare not look on thee;
> I feel but see thee not. I scarce endure
> The radiance of the beauty (Act II, scene 5)

the accent is definitely Dantesque. It is the same splendour of light that pervades the vastness of *Paradiso* and conceals its blessed spirits. It is the same transformation which Beatrice undergoes as she proceeds from heaven to heaven, till she becomes so full of light that Dante is unable to look on her. Or when the spirit of the Earth bursts out in joyous exclamation—

> The joy, the triumph, the delight, the madness!
> The boundless, overflowing, bursting gladness,
> The vaporous exultation not to be confined!
> Ah! Ah! *The animation of delight*
> *Which wraps me, like an atmosphere of light*
> And bears me as a cloud is borne by its own wind.

it is the same phenomenon of gaining in light from joy which we have observed in Dante. Or again, when voices in the air sing

> Child of light! thy limbs are burning
> Through the vest which seems to hide them;
> As the radiant lines of morning
> Through the clouds ere they divide them;
> And this atmosphere divinest
> Shrouds thee wheresoe'er thou shinest

not only the spirit and phraseology of *Paradiso* but also that of *Vita Nuova* returns to drown us in this splendour.[44]

Shorn of mythology and allegory, the Shelleyan drama is constructed upon three moral principles: the principle of love, the principle of justice and as a concomitant of both the problem of will. Looked at from this point of view as well, we find resemblances between *Prometheus Unbound* and *Paradiso*.

Dante says that the confines of Paradise are light and love. All inhabitants there live in light and love and peace. Love, according to Dante, is not only the great principle of life, but it is the very essence of God. From this primal power it flows throughout the universe. It is coeval with the Primal Power and so the poet also calls him "il Primo Amore" (Primal

Love). Love is the force which moves "il Sole e l'altre stelle" and "né creator né creatura mai fu senza amore" (there was no creator nor things created without love). Every cànto of *Paradiso* palpitates with the sense of this primal love, and as we come to the end of the poem, we feel exalted at the presence of this all-pervading love which clasps whatever the universe unfolds, from the highest to the lowest, into one volume.

Nel suo profondo vidi che s'interna
legato con amore in un volume,
cio che per l'universo si squaderna.

This unification of the scattered things of the universe into one whole by means of love is also emphasised by Shelley in *Prometheus Unbound* where he says:

Common as light is love,
And its familiar voice wearies not ever.
Like the wide heaven, the all-sustaining air,
It makes the reptile equal to the God.
(Act II, scene v)

"Common as light is love" says Shelley. Dante makes light and love coextensive in Paradise. And if Shelley makes the reptile equal to God through love, Dante finds everything "legato con amore." The whole universe is for him tied into a knot by love—"La forma universal di questo nodo credo ch'i' vidi."

But Paradise is not merely light and love, it is also sustained by the principle of justice. All the blessed spirits that live there are content with the place allotted to them, because they have submitted their will to the will of God in the deep conviction that justice and love go hand in hand. As God's kingdom is the kingdom of love, it is also the kingdom of justice, though it often happens that divine justice appears unjust in the eyes of the mortals (parere ingiusta la nostra giustizia nelli occhi de'mortali). Nowhere in Paradise is there a clash of wills, because all wills are a part and parcel of a superior will, which is the mighty ocean, whither tends whatever it creates and nature makes (quel mare al qual tutto si move cio ch'ella cria e che natura face).

In all the spheres of Dante's Paradise the blessed spirits live quietly and gladly because they are possessed of this sense of accord between the individual and the divine will. This ideal harmonious existence of the blessed spirits has been symbolised by the poet in the creation of the figure of the Divine Eagle, the mouthpiece of Justice, through whom he admonishes

all: Diligite Iustitiam Qui Iudicatis Terram (Love righteousness, ye that be judges of the earth). This luminous figure is a marvellous creation of Dante's soul, a soul that always battled for justice, for pure human justice in disregard of all questions of creed and faith. During the long course of his dolorous life he brooded upon the problem of equity and the same problem agitated his mind during his journey through the three worlds. When in the first circle of Hell, the Limbo, he met the mighty spirits of antiquity, spirits that spent their lives in enlarging the field of human happiness and welfare, he was deeply assailed by sorrow at their fate and he could not understand how their great merit could bring them this reward. A doubt about justice arose in him and with this doubt concealed in his heart, he travelled through entire Hell and Purgatory till in the nineteenth canto of *Paradiso,* in the circle of Heaven of spirits that had administered justice in the world, before the Divine Eagle, the symbol of omnipotent justice, he opens the question that was constantly gnawing his heart, the question of merit and retribution.

It is a tragic but memorable situation,—a little frail human soul carrying the problem of justice to the very doors of the Infinite, and along with this problem, the entire problem of human sorrow and misery.

The Divine Eagle, the Eagle of Justice, lifts its thoughts to the inaccessible regions of mystery and utters a reply which is grave, profound and severe. He speaks of an arcane justice beyond the comprehension of men:

> Pero ne la giustizia sempiterna
> la vista che riceve il vostro mondo,
> com'occhio per lo mar, entro s'interna;
> che, benchè da la proda veggia il fondo
> in pelago nol vede; e nondimeno
> egli, ma cela lui l'esser profondo....
>   Quali
> son le mie note a te, che non le 'ntendi,
> tal è il giudicio etterno a voi mortali. (*Par,* xix)

In Shelley's drama the principle of justice has been incarnated in the figure of Demogorgon, and as the Divine Eagle in Dante's poem speaks of mysterious divine justice ever operating throughout the universe, so also Demogorgon, in a solemn voice, gives expression to the idea of justice the roots of which lie deep in the abysm of eternity.

> If the abysm
> Could vomit forth its secrets....

with this uncanny reply he satisfies the questioning heart of Asia.

The Divine Eagle in *Paradiso* further says:

> Oh terreni animali! oh menti grosse!
> La prima volontà, ch'è da se bona
> da se, ch'è sommo ben, mai non si mosse.
> Cotanto è giusto quanto a lei consona: (*Par.* xix, 85-88)
> (O animals of clay! O spirits gross!
> The primal will, that in itself is good,
> Hath from itself, the chief Good, ne'er been moved.
> Justice consists in consonance with it).

Here Dante connects the principle of justice with the problem of will. Justice shall be done to him who wills rightly. What is right willing? He has raised and discussed this question in the fourth canto of *Paradiso*. In the third canto, in the heaven of the moon, Dante met Piccarda and her companions who had been, in their earthly life, forced by others to break the vow of chastity. When the poet saw them, the question naturally arose in his mind as to why was the degree of their merit diminished, because, though they broke their vows by the force of others, they remained true to God at heart. What justice was it to place them in a lower circle in heaven for an act which they had not willed? The answer to this question is given by Beatrice in the fourth canto. Whoever will read this canto will agree that in this canto Dante affirms the absolute liberty of moral will and its capacity to lift itself towards justice and God against all the forces of nature and men. Right willing is not merely having good intention. Three stages may be detected in the evolution of the conception of right willing. In the beginning the character of a crime was searched in the action itself, and men tried to cancel the effect of an action by adequate punishment. In the second stage, man adjudged an action not by its own nature, but by the motive behind it. In this stage was generated the idea of pardon, and instead of punishment, penitence was prescribed as a remedy for removing the effects of an action. Crime was thus removed from action to will. But what, asks the doubting poet,

> Se 'l buon voler dura
> la violenza altrui per qual ragione
> di meritar mi scema la misura?
> (if the good intent remain,
> What reason that another's violence
> Should stint the measure of my fair desert)? (*Par.* iv)

No, replies Beatrice, that is not perfect will which yields to force. It is not sufficient to nourish a good intention *nel velo del cuore.* To the extent a man's will yields to force, it follows force. To will rightly, perfectly, it must constantly struggle against the evil. Even when violence tries to bend it, it must constantly rise in revolt against all oppression. It is only when man's will rises with indomitable energy against tyranny and fear to increase the fund of human felicity and welfare, that it may be said to act in consonance with the supreme will. Piccarda and her companions failed in this respect. They undoubtedly suffered from violence, but their will was also not strong. In the struggle against the evil force which snatched them away from the monastery, they yielded more or less by failing to return at the first opportunity to the place from where they were taken away.But

Volontà, se non vuol, non s'ammorza
ma fa come natura face in foco,
se mille volte violenza il torza.
(the will,
That wills not, still survives unquenched, and doth,
As nature doth in fire, though violence
Wrest it a thousand times).

The character of Prometheus is a figuration of the perfect will as discussed by Dante in the canto mentioned above. Though thousand times oppressed, the will of Prometheus remained steadfast to the great cause for which he suffered. He opposed tyranny and violence with a will that had strength of steel and did not keep concealed *il buon voler nel velame del cuore.* In him we find exemplified the two wills of which Dante speaks in the canto, the will absolute, and the will relative. The absolute will is the spontaneous impulse to follow and to appreciate whatever is good, and the relative will not only loves good but also takes account of the evil to be conquered. Many may possess the absolute will, but they fail in relative will because they cannot rebel against evil for fear of further violence and persecution. In the character of Prometheus the two wills exist in their perfection and eternal justice fulfils itself through inscrutable ways.

Thus, as in *Paradiso,* so also in Shelley's drama we find three chief trends of thought. Asia incarnates the principle of love, Prometheus of will, and Demogorgon of justice. And as in *Pasadiso* the triumph of these three principles is sung in verses that are vibrant with the animation of inexhaustible delight, so also the final scenes of *Prometheus Unbound* usher

the fulfilment of these principles in verses that have "such a Bacchic reel and rout and revelry of beauty as leaves one staggered and giddy."[45]

We shall conclude our remarks on this immortal drama by mentioning the fact that in Act II, 135-6 he made a verbatim translation of a line of Dante taken from the inscription over the gate of Hell: All hope abandon ye who enter here. (Lasciate ogni speranza, voi ch'entrate).

In *The Cenci*, Act I, scene i, Camillo says:

Hell's most abandoned fiend
Did never, in the drunkenness of guilt,
Speak to his heart as now you speak to me.

"Hell's most abandoned fiend" is evidently a recollection of what Dante says in Canto III of *Inferno* about the condemned spirits that are so abandoned as not to be received even in the depth of Hell.

The next poem in which Dante's influence is most marked is *Epipsychidion.* It was composed at a moment when Shelley felt the intoxication of *amore eccelso* of which the Italian poets of the time of Dante sang. Emilia in this poem has been sung somewhat in the same way as Dante sang of Beatrice, or Petrarch of Laura or Cavalcanti of his lady-love. Emilia, that beautiful girl whom Medwin describes as "indeed lovely and interesting", with a profusion of black hair "tied in the most simple knot, after the manner of a Greek Muse in the Florence gallery", has been idealized here into almost a *donna-angelo*, in the manner of those early Tuscan mystics of love, with their ethereal spirituality and their spirit of adoration. I have traced this influence in full in a separate study of the poem and those who are interested in it, are referred to that work.[46]

In *The Witch of Atlas* the lines that occur in stanza xii,

For she was beautiful—her beauty made
The bright world dim, and everything beside
Seemed like the fleeting image of a shade:
No thought of living spirit could abide,
Which to her looks had ever been betrayed,
On any object in the world so wide,
On any hope within the circling skies,
But on her form, and in her inmost eyes.

remind one forcibly of the following lines of Dante in *Paradiso* xxxiii:

A quella luce cotal si diventa,

che volgersi da lei per altro aspetto
é impossibile che mai si consenta.
(It may not be,
That one, who looks upon that light, can turn
To other object, willingly, his view).

In *Adonis* Dante's influence is traceable in stanza iv, where the line—the Sire of an immortal strain, is a rendering of Dante's Signor dell' altissimo canto. The thought embodied in stanza xliii of the same poem may be compared with what Dante says in canto i and canto xiii of *Parasido*.[47]

In *Hellas*, the beginning of the famous last chorus,

The world's great age begins anew,
The golden years return,

bears strange resemblance to Dante's

Secol si rinova;
Torna giustizia, e 'l primo tempo umano. (*Purg.* xxii)
(The age begins anew,
Justice returns and with it he primeval times of man)[48]

We now come to *The Triumph of Life*. It is mainly of Petrarchan inspiration, as we have seen. But the traces of Dante's influence in it are not a few. He has been directly mentioned in

Behold a wonder worthy of the rhyme
Of him who from the lowest depths of hell,
Through every paradise and through all glory,
Love led serene, and who returned to tell
The words of hate and awe; the wondrous story
How all things are transfigured except Love.

The influence of the twenty-eighth canto of *Purgatorio* which was also translated by Shelley, is felt in some of the descriptive passages of the poem. The setting and phraseology of the description from line 308 onward bears the impress of the description of Terrestrial Paradise in Dante's canto. As there, so also here we find the vision of a mountain, from a cavern of which comes out

a gentle rivulet,
Whose water, like clear air, in its calm sweep
Bent the soft grass

bringing to mind Dante's

un rio,
che 'nver sinistra con sue picciole onde
piegava l'erba che'n sua ripa uscio.

(a rill, which, to the left
with little rippling waters bent the grass
That issued from its brink).

There is also a deep similarity between the sudden appearance before Rousseau of a shape all light gliding along the river and of Matilda before Dante and just as in Dante, this object, rising suddenly to view chases away all other thought,

e lá m'aparve, si com'elli appare
subitamente cosa che disvia
per maraviglia tutto altro pensare,

so also in Shelley the movement of the feet of that shape seemed

to blot
The thoughts of him who gazed on them.

And as Dante approaches Matilda with a questioning heart and she illumines him with her reply, so also in Shelley's poem Rousseau questions the shape that quenches his thirst with her reply. Again, as in canto twenty-ninth of *Purgatorio*, while Dante and Matilda move slowly along the opposite bank of the rivulet, a sudden light runs through the forest ushering the triumphal entry of the chariot of the Church, so also in Shelley, there appears before Rousseau a sudden illumination, a new vision, never seen before, ushering the entry of the chariot of life.

There are other traces of Dantesque influence in the poem. The lines

the crew
Seemed in that light, like atomies to dance
Within a sunbeam (445-48)

are suggested by Dante's

cosi si veggion qui diritte e torte,
veloci e tarde, rinovando vista,
le minuzie de' corpi, lunghe e corte,
moversi per lo raggio....
(Thus oft are seen with ever-changeful glance
Straight or athwart, now rapid and now slow,
The atomies of bodies, long or short,
To move along the sunbeam) (*Par.* xiv)

To this may be ascribed the following lines as well

a great stream
Of people there was hurrying to and fro,
Numerous as gnats upon the evening gleam (114-16)

whereas the lines

> That what I thought was an old root which grew
> To strange distortion out of the hill side,
> Was indeed one of those deluded crew

are derived from the contorted features of trees described by Dante in canto xiii of *Inferno.*

The lines

> all things that in them wear
> The form and character of mortal mould,
> Rise as the Sun their father rose...(ll. 16-18)

are based upon Dante's

> Quelli ch'é padre d'ogni mortal vita. (Par. xxii, 117)

Shelley's imagery of a lily "stricken by the wand of dewy morning's vital alchemy" may be compared with Dante's "fioretti dal notturno gelo chinati", whereas his simile of the creatures of the crowd being borne

> as through the sky
> One of the million leaves of summer bier

recalls to mind Dante's simile of condemned spirits being carried away like dry autumnal leaves.

Of the minor poems of Shelley, mention may be made of *The Tower of Famine* which was suggested by the Ugolino episode in *Inferno* and the *Boat on the Serchio* which contains a translation of a line of Dante :

> It was that hill, whose intervening brow
> Screened Lucca from Pisan's envious eye.

cf. fra ponendosi nasconde Lucca all' invidioso occhio del Pisano.

It has also been suggested that the influence of Dante's *Purgatorio* is written large over *The Sensitive Plant*[49] and that some ideas of *The Cloud* are to be found in *Purgatorio,* v, 109-111 and xix, 34-36.[50]

We have discussed Shelley's relation to four major Italian poets—Dante, Petrarch, Ariosto and Tasso. But he had also read and admired Boccaccio and other worshippers of the Italian muse. Laudatory references to Boccaccio occur in his letters[51] and at least one example of the Italian's influence can be found, i.e. in the description of Demogorgon. In Act II, scene iv of *Prometheus Unbound,* Shelley describes Demogorgon as

a mighty darkness
Filling the seat of Power, and rays of gloom
Dart round, as light from the meridian sun,
Ungazed upon and shapeless.

This description tallies with the description of Demogorgon by Boccaccio in the *Genealogy of the Gods.*[52]

Of the other Italian poets, Olindo Guarini's *Pastor Fido* was read by Shelley in 1815 and a manuscript of this was seen by him at Ferrara. He was also acquainted with the works and the autobiography of Alfieri.[53] Among the prose writers, he was fond of Macchiavelli and Francesco Guicciadini. Manso's life of Tasso was one of the books read by him on his first arrival in Italy.

Medwin avers a curious thing. He says that he and Shelley had read together *I Promessi Sposi* by Alessandro Manzoni. "He (Shelley) admired the hero and heroine; said it was an original conception, finely worked out, to make them peasants; that Don Abbodio was a piece of life-like drawing, and did not wander that an Italian, so different is the spirit of our language from his own, should call Shakespeare a barbarian. He pointed out to me the scene in the Innominato's castle, when he is first attacked with the plague, and looked upon the description of that pestilence at Milan, as far superior to those in Defoe and Thucydides."[54]

But the fact is, Manzoni had begun to write this novel only in April 1821 and after an intermittent labour of two years completed it in 1823. Its first title was *Fermo e Lucia.* The entire novel in manuscript was written by the author and published in 1827 under the present title.[55] How could then Shelley and Medwin read the novel together?

As regards Olindo Guarini, Dowden says that the influence of his pastoral drama is to be found in the verse-structure of the poem *The Daemon of the World.*[56] He also suggests the possible influence upon *The Witch of Atlas* of another Italian poet, Nicolo Forteguerri, whose *Ricciardetto* was read by Shelley in the summer of 1820. Acting on this suggestion Ackermann has investigated the extent of this influence. It seems to him that he can find a model for the cavern of the witch in "Margutte e sua grotta" of the Italian poem and for the boat-journey of the witch in canto v and x of the same. Ackermann also finds parallels between Shelley's description of the Egyptian places and those found in *Ricciardetto.*[57]

We have come to an end of our study. It was, I think, T. S. Eliot, who said that it requires a soul of Shelley to understand Dante. From what has been shown above, it can also be said with equal justness that it requires a knowledge of Dante and of the other great poets of his country to appreciate some aspects of Shelley's poetry. Though we have found Shelley heavily indebted to other poets, we have not in our mind the slightest idea which may prove derogatory to his originality. He believed in the reality of the world of thought. The thought-world of the different ages is interlinked by the eternal flight of poesy. The turns of poetic thought which flourished in distant times and alien climes have found a new and congenial domicile in the imagination of Shelley and with their new vestments of beauty not only enriched the glory of him who received them but also the glory of those that gave them birth.

NOTES;

1 At the commencement of the Michaelmas Terms, that is, at the end of October in the year 1810, I happened one day to sit next a freshman at dinner ; it was his first appearance in the hall......I know not how it was that we fell into conversation......The stranger had expressed an enthusiastic admiration for poetical and imaginative works of the German school. I dissented from his criticisms. He upheld the originality of the German writings. I asserted their want of nature. "What modern literature", said he, "will you compare to theirs ?" I named the Italian. This roused all his impetuosity ; and few, as I soon discovered, were more impetuous in argumentative conversation......I remarked that it was time to quit the hall, and I invited the stranger to finish the discussion at my rooms......as soon as he arrived at my rooms, and whilst I was lighting the candles, he said calmly, and to my great surprise, that he was not qualified to maintain such a discussion, for he was alike ignorant of Italian and German, and had only read the works of the Germans in translations, and but little of Italian poetry, even at second hand. For my part, I confessed, with an equal ingenuousness, that I knew nothing of German, and but little of Italian ; that I had spoken only through others, and, like him, had hitherto seen by the glimmering light of translation.

Hogg's *Shelley at Oxford*, Methuen & Co., 1904, pp. 6-8.

2 F. W. Stokoe : *German Influence in the English Romantic Period*, Cambridge University Press, 1926, p. 144.

3 Corrado Zacchetti in his *Shelley e Dante* attributes the *Song translated from the Italian* to Elizabeth Shelley, the poet's sister, and considers the translation to be a fiction.

4 The thrillers of the time had made Italian themes popular and the Italian elements in the early novels of Shelley may be traced to their influence.

The Post-mark of the letter to Hogg is May 2, 1811. It contains the following passage :

Have you hope ? Can you have hope ? Then, indeed, are you fitted for an Orlando Speroso—if there is such an Italian word. I have faint hopes etc.

HOGG's *Life of Shelley*, J.M. Dent, 1933, p. 215.

Orlando Furioso is such a famous book in Italian and it has been so well known in England that Shelley might be expected to know the book by name without knowing Italian. "Speroso" is coined from the Italian verb "sperare" (to hope) by adding the "oso" of "furioso" to the root. Shelley knew Latin, and he may have formed the word with the help of the Latin verb "sperare" (to hope). The correct Italian form of the word is "speranzoso".

[5] Mr. NEWTON was a vegetarian and his philosophy fills a large portion of the notes to *Queen Mab*.

[6] During his protracted residence in London, writes Hogg, and the vicinity of London, in the years 1813 and 1814, an auspicious, beneficial and happy period, we had the good fortune to form a most agreeable intimacy with certain amiable and elegant friends and associates, whose favourite studies were the Italian language and literature ; some of whom even had formerly resided in Italy....By their salutary example, by gentle persuasions, and a soft and benign influence, they called the attention of my friend and myself to a participation in their pursuits....I procured a sufficient apparatus of approved grammars and dictionaries, and bestowed much of my leisure upon them....he (Shelley) was impatient of such tardy methods of progression....We read together the fine poem of Tasso....when we came to our second author, it was different—our course of conjoint study no longer ran smooth....Ariosto had excited, fascinated him....He spoke of the unparalled poem with wild rapture during our walks, and read aloud to me detached passages with energy and enthusiastic delight....we did not undertake to seek for a meaning in the abstruse and gloomy sublimity of Dante, until a subsequent period....with respect to the other one of the four great Italian poets (Petrarch)....we were sweetly and forcibly drawn towards him by a peculiar attraction, and were tied fast to his verses, spell-bound by a potent charm. A most engaging lady of our circle had surrendered herself a fair prey to a kind of melancholy, arising, as far as I could discover, from causes purely imaginary....she required consolation, she said, she sought it, and found it at last in the poetry of Petrarch.... (*The Life of Shelley as comprised in the Life of Shelley by T. J. Hogg, The Recollections of Shelley and Byron, by Edward J. Trelawny, Memoirs of Shelley by Thomas Love Peacock.* ed. by Humbert Wolfe, J. M. Dent, 1933, vol. 2, pp. 61-63.)

The sentimental lady mentioned by Hogg is perhaps Cornelia, daughter of Mrs. Boinville.

[7] When Hogg next speaks of the Boinvilles, he makes use of a disparaging language :....I sometimes met him (Shelley) at the house of our common friends, and several times in particular at the adjacent lodgings of the lady friend (Mrs. Boinville), for whose sake he had emigrated to Pimlico. She was an amiable and accomplished old lady, and tolerably agreeable, but too much of the French school to be quite so, the greater part of her associates were odious....all of low origin, and vulgar and offensive manners....I bore with the rabble rout for a little while, on account of my friend, and because I could there enjoy his precious society....From the quiet street in Pimlico they retired to Bracknell, a still quieter place, where Shelley took a small house with the attractive title, "High Elms".

(Op. Cit. Vol 2, pp 107-108)

[8] Still later, in a letter written from Pisa to Leigh HUNT, SHELLEY accused BECCARIA of plagiarising from THORTON's *Esquisse de la Legislation.*

[9] Forman's edition of SHELLEY's works, p. lxxxiv. and DOWDEN's *Life of Shelley,* Vol. I, p. 505.

[10] *Shelley and the Unromantics,* by O. W. CAMPBELL, METHUEN, 1924, p. 120.

[11] So you know the BOINVILLES, SHELLEY wrote from Rome to Peacock in 1819. I could not help considering Mrs. Boinville, when I knew her, as the most admirable specimen of a human being I had ever seen. Nothing earthly ever appeared to me more perfect than her character and manners....Cornelia, though so young when I saw her, gave indications of her mother's excellences.

We can compare this estimate by SHELLEY of the character of Mrs. BOINVILLE and her daughter with that of HOGG mentioned before.

[12] *The Pursuit of Death* by Benjamin P. Kurtz, p, 84.

[13] cf. Wordsworth, *Excursions* ll 41-47 and *Alastor* ll 13-15, Wordsworth, *Tintern Abbey,* ll 94-100 and *Alastor* ll 45-49, Wordsworth, *Excursions* III, 150-54 and the description of the nook in *Alastor,* 572 and ff. Coloridge, *Sibylline Leaves* and *Alastor* 20ff. Southey *Thalaba* III, 25, XI, 31, VII 6, 22 and *Alastor* 167-168, 312-313, 375ff, 449ff, respectively. Verses 87-94 of *Alastor* resemble Delille's description of the grottoes of Antiparos and Milo in *L' Imagination* and many details of description are found in Volney. See Ackermann's *Quellen, Vorbilder, Stoffe zu Shelleys Poetischen Werken*, 1890.

[14] Hogg, Op. Cit. pp 62-63.

[15] Dowden's *Life of Shelley,* vol. I., p. 517.

[16] Dowden's *Life of Shelley,* vol. II, pp. 210 & 212.

From Lucca Mrs. Shelley writes on 15.6.1818 :

So we lead here a very quiet pleasant life, reading our canto of Ariosto........I begin to be very much delighted with Ariosto ; the beginning of the 19th canto is particularly beautiful. *Shelley's Memorials,* Lond, 1859, p 92.

On 2.7.1818 she writes : We are now in the 36th canto of Ariosto. How very entertaining it is, and how exceedingly beautiful are many of the stories ! Yet I cannot think him so great a poet as Spenser, although as I said before, a much better story-teller." (*Ibid,* p. 101). It is interesting to observe how the taste of the wife differs from that of the husband in regard to Ariosto and Tasso. On 17.8.1818 Mary writes : "Tasso, whom I like,.... but I do not know that I like so well as Ariosto."

[17] Giovanni Tambara, in his edition of Ariosto's satires (Leghorn, 1903), shows that the manuscript of Ariosto which Shelley saw at Ferrara, is not in Ariosto's own handwriting, but is only a copy.

[18] *Occhio di birichino* may be translated as impish look. Rossi, *Storia della Letteratura Italian,* Vallardi, 1930, vol. II, p. 197.

[19] Dowden, Op. Cit. vol. II, p. 75. Forman, however, in his edition of Shelley's works, says that the poet also read Tasso in 1814-15.

[20] Medwin's *Life of Shelley,* T.C. Newby, London, 1847, vol II, p. 39.

[21] Garnett found in the notes of Shelley points for two scenes ; (1) scene in which Tasso read a sonnet to Eleonora ; and (2) his disguise as a shepherd and final revelation.

[22] Dowden, op. cit. vol II, p. 238.

[23] Ibid, vol II, p. 238.

[24] Hogg, Op. Cit., pp 64-66

[25] Helen Richter (*Shelley*, Weimar, 1898, p. 612) and J. A. Symonds (*Shelley*, London, 1887, p 174) find special indebtedness to *Trionfo dell' Amore.*

[26] The car-motive in *Queen Mab* was, as shown by my former colleague Prof. A. K. Sen of the Calcutta University in his *Studies in Shelley*, perhaps derived by Shelley from Southey's *The Curse of Kehama.* But I would not go so far with him as to say, as he does, that the car-motive in *The Triumph of Life* is also a fruit of Southey's influence. The reference to the Roman triumphal pageants is a direct hint to the influence of Petrarch's poem. There may be also a reminiscence of Dante's description of the car in *Purgatorio.*

[27] Hog. op. cit. p. 63.

[28] According to Helen Richter Shelley translated this sonnet in 1814 (op. cit. p. 213).

[29] Dowden, Op. Cit. vol. II, p. 275.

[30] Letter to Peacock from Pisa in Nov. 1820.

[31] Helen Richter, however, says that Shelley also read the *Vita Nuova* with Mary in Dec. 1820 (Op. Cit. p. 183).

[32] Medwin, *Life of Shelley.* vol II, p. 5

[33] Op. cit. I, 268.

[34] ibid, II, 254-55.

In a letter to Leigh Hunt (3. 9. 1819) Shelley indicates his preferred episodes in the *Divine Comedy.* They were the story of Francesca, the scene of the spirit coming over the sea in a boat, Matilda gathering flowers.

In another letter, written shortly before his death, he stated that if people fully appreciated the last scene of the *Purgatory* and the first ones of the *Paradiso*, great things might be hoped for in Italy.

In *On the Devil and the Devils* Shelley considered *Purgatorio* a better poem than *Inferno.* But *Paradiso* was for him "a perpetual hymn of love".

[35] The precise date of the poem cannot be fixed. It was perhape written at various periods of year 1817.

[36] Medwin, op. cit. vol II, 254-55.

[37] Oliver Elton, *A Survey of English Literature,* 1780-1830, vol II, p. 211.

[38] Bridges, *Collected Essays,* viii, p. 253.

[39] Todhunter, *A Study of Shelley,* Kegan Paul, 1880.

[40] A light, so swiftly coming through the sea,
....................and saw it grown in size
And brightness : (Cary's translation)

[41] a small bark so swift
And light, that in its course no wave it drank. (Cary)

[42] We live desiring without hope. Petrarch has 'vivo del desir four di speranza. Milton made use of the Dantesqe expression in *P. L.* x. 995—And with desire to languish without hope.

[43] Diverse lingue, orribill favelle,
parole di dolore, accenti d'ira,
voci alte e fioche e suon di mano con elle
facevano un tumulto..

[44] cf. the last sonnet of *La Vita Nuova :*

Vede una donna, che riceve onore
e luce si, che per lo suo splendore
lo peregrino spirito la mira.

cf. also Cavalcanti's

Chi è questa che vien, ch' ogni uom la mira,
che fa di clarità l'aer tremare ?

[45] Francis Thomson—*Shelley*, Burns oates & Washbourne Ltd., 1928,p 59.

[46] *Shelley's Epipsychidion, a study*, by P.N. Roy; General Printers Publishers Ltd., Calcutta.

[47] Le cose tutto quanto etc in *Par* i, and cio che non more e cio che puo morire etc in *Par*. iii.

[48] Dante has here condensed Virgil's verses in Eclogues. iv.

Magnus ab integro saeclorum nascitur ordo.
Iam redit et Virgo ; redeunt saturnia regna :
Iam nova progenies caelo demittitur alto.

Shelley's inspiration may have come from both the sources. He was acquainted with Virgil's passage as appears from a note to *Hellas*.

[49] Peck, *Life of Shelley*. vol. ii, p. 167.

[50] Corrado Zacchetti, *Shelley e Dante*

[51] Letter to Leigh Hunt from Livorno on sep. 27, 1819, contains the following : "I have lately been reading this most divine writer. He is in a high sense of the word, a poet and his language has the rhythm and harmony of verse..How much do I admire Boccaccio..Boccaccio seems to me to have possessed a deep sense of the fair ideal of human life, considered in its social relations etc etc."

[52] Baccaccio writer's *:* With the greatest majesty of darkness, that most ancient ancestor of all the gentle gods, Demogorgon, accompanied on all sides by clouds and mist appeared before me". But Shelley may have drawn upon other sources as well, for we find descriptions of Demogorgon in Ariosto, Milton and some Latin poets.

[53] Forman's ed. of Shelley's works. On 22. 9. 1818 Shelley writes to Mary—"do you be prepared to bring at least some of *Myrrha* translated, bring the book also with you".

[54] Medwin's Life of Shelley, 1847, vol, 2 p. 32

[55] Vittorio Rossi, *Storia della Letteratura Italiana*, vol. 3, p, 3

[56] Dowden, *Life of Shelley*, vol. 2 p. 517. The poem in question is only an improvement upon the language used in *Queen Māb* otherwise the verse-form and the stanzas are more or less the same in both poems.

[57] Richard Ackermann, *Shelley*, 1906.

A STUDY IN THE MARITAL RELATIONSHIP OF THE HUMAN PAIR IN THE PLAYS OF OLIVER GOLDSMITH

N. M. KULKARNI, M.A.

For a bachelor like Oliver Goldsmith to indulge in match-making experiments might appear to be singularly inapt, but we may assume that a spectator sees better than those who play the game. The human pair in the game of life has always lent itself to imaginative treatment in works of fiction, and the theme has been viewed from the shifting focal points of tragedy and comedy from Shakespeare to Shaw. The endeavour to found the ideal relation between Adam and Eve has been all too universal, and we have in our own day developed this into a respectable science which bids fair to prescribe the limits within which, by a process of preferential breeding, *Homo Sapiens* might rise to higher levels of destiny. "It has seemed to me," writes Lin Yutang, "that the final test of any civilization is, what types of husbands and wives and fathers and mothers does it turn out ?" Long, however, before eugenics entered in the field of marriage, the sociologist and the artist have tackled this problem in their own way. In the Hindu system of marriage, for example, we observe an ill-defined endeavour at preferential selection which requires the units of the human pair to belong to two different pedigrees known as the *gotras*. And to the artist, too, the pairing of heroines and heroes has had a fascination inducing him to observe certain ethical and aesthetic values in the choice of such selection.

I propose to examine in the present paper some of these values which determine the marital choice dramatised in the plays of Oliver Goldsmith. We know that Goldsmith wrote only two plays and an unpublished farce. But these plays have remained as oases in the arid sands of the eighteenth century drama. We may yet further eliminate one of these and limit our observation to the other play of his, because *The Good Natured Man* was only the springboard from which Goldsmith gathered the dramatic momentum that landed him on the heights of *She Stoops to Conquer*. Critical opinion has been univocal in the commendation of this dramatic masterpiece of Goldsmith ; and from the none too easily appeasable Doctor Johnson to Edmund Gosse in our own century, the merits of the play have been endlessly dwelt upon. But the trend in

the dramatic criticism of Goldsmith has been mostly aesthetic and here, too, the emphasis has been laid on the negative aspect of his dramatic genius. That Goldsmith fought an unequal battle against the sentimental comedy of his day has been made the basis of his dramatic greatness. Such an estimate of the dramatist's achievement is eminently true, but it is partial. It is inadequate in so far as it fails to appreciate the solid human appeal inherent in the dramatic design in which Goldsmith locates the human pair. The human interest in his works, dramatic as well as non-dramatic, is heightened by the introduction of an artistic Providence that guides the destinies of the dream children that Goldsmith created and set on the stage to participate in the game of life. Like an anxious father solicitous of securing a happy home for his children, Goldsmith has apparently given good thought to the question of a sound matrimony for his characters. It is this aspect of his plays that has no been dwelt upon in the various criticisms of Goldsmith.

This is a deeply interesting theme in Goldsmith. It is as if Goldsmith tried to correct himself by a study of the various marital experiments that he introduces in his works. For no writer is more auto-biographical in his works than he, and in the marriages he introduces in his stories, Goldsmith illustrates the pitfalls in which youths too often fall in their eager search for partners in life. Believing, in the words of his Vicar of Wakefield, that the honest man who married and brought up a family is the best unit in a civilised community, Goldsmith introduces several pairs in his plots and by the way in which these pairs turn out he seems to determine the limits within which happy marriages may be made. The most typical of his works in this respect is undoubtedly *She Stoops to Conquer* because here we witness the spectacle of a quadrangle of weddings each of which is an illustration of a single principle of preferential choice between the human pairs. And it is interesting to note how in each of these experiments in marriage and marital relations the success or failure depends on how far that single principle of selection has been obeyed by the parties concerned.

If a Hegelian were to approach this principle he might perhaps explain it in terms of a thesis, antithesis and synthesis. It would then appear that marriage of the human pair in Goldsmith is an attempt to synthesise two essentially contrasted human temperaments. These contrasted temperaments are represented by the wife and husband in the married couple, and by the lovers about to be united by marriage. The problem of the human pair in Goldsmith thus resolves itself into a study

in contrasts that are finally reconciled in the marriage of the pairs. The points of contrast are the traits in human character which determine the individuality of the parties to the union. For the sake of emphasis these contrasts are heightened so that each of the pair stands in strong relief against the other. Set in such contrasting colours, the human units seem at first sight to be the last persons in the world to wed one another. And yet Goldsmith seems to argue that the only form of ideal relationship between man and woman is that wherein these contrasts are employed as mutual correctives. The manner in which he sets out to present this thesis is extremely interesting.

Let us now examine the particular examples of the human pair in Goldsmith's plays. Of the two plays of Goldsmith I have taken *She Stoops to Conquer* as the object of the present study, because the principle I have enunciated above is worked out in this play along a wide range of marital relationships. There are no less than four pairs in the play, although in one of these there is only a potential husband who might be said to be an exception to the general principle which determines the marriage of the other three. But on a closer study it will be found that this is an exception that proves the rule. Actually there are three married couples when the curtain falls down, and the fourth is dismissed at large as a misfit in the scheme of marital values successfully applied in the other three examples. This, according to Goldsmith, is the nemesis attending upon the incorrigible Adam in us all, represented by the ever memorable Tony Lumpkin, Esquire, of Blank Place.

Of the three human pairs in *She Stoops to Conquer,* one is the example of married love represented by Mr. and Mrs. Hardcastle, and the other two are examples of lovers about to be married, namely young Marlow and Miss Hardcastle, and Hastings and Miss Neville. It is obvious that in the case of the married couple the principle of contrast in temperaments is fully applied. The two units in this pair are seen to possess qualities of the head and the heart that are apparently irreconcilable. Mr. Hardcastle is as much a problem to Mrs. Hardcastle as any husband could conceivably be to his wife. A lover of everything that is old, including an old wife, Mr. Hardcastle represents the solid virtues of the essentially conservative Englishman. He is thus the despair of Mrs. Hardcastle who is shocked to hear herself described as old !

"Here we live in an old rumbling mansion," the poor wife complains, "that looks for all the world like an inn, but that we never see company....I hate such old-fashioned trumpery."

And pat comes the response:

"And I love it. I love everything that is old......"

When it comes to a discussion about the conduct of their son, Tony Lumpkin, the reactions of the pair are equally opposed, if amusing:

"Come, Mr. Hardcastle, you must allow the boy a little humour."

"I'd sooner allow him the horse pond!"

"Anybody that looks in his face may see he's consumptive."

"Ay, if growing too fat is one of the symptoms."

And so goes the endless wrangle between this pair throughout the play. Both husband and wife are poles apart in their responses to the domestic and social environment. And yet there is a certain harmony in the household because each of the pair acts as a corrective of the excesses of the other. There is a sobering influence exercised by each to the benefit of both, and between themselves the Hardcastles present a picture of family life made endearing and lovable by the happy little daughter and the happy-go-lucky son. In effect this couple illustrates the principle of human pairing in the realised ideal of a married life, as Goldsmith conceives it.

More interesting than this is the case of the youthful lovers. Here the fact of marriage is faced with a complete awareness of the apparently irreconcilable traits of character represented by the parties to be wedded in the course of the drama. In effect the case of these lovers illustrates the principle of what may be termed the longrange love as opposed to the short-range type known as love at first sight, dear to the hearts of romantic writers. Both Marlow and Hastings are placed in the same contrast. This contrast refers to the traits of character shown in Marlow and Miss Hardcastle on the one side, and Hastings and Miss Neville on the other.

The inexplicable shyness and modesty of Marlow, his want of self-confidence and his extreme awkwardness while he is in the company of respectable women—all these traits are significantly set off against the intrepidity, the boldness and the all too manly initiative of Miss Hardcastle. And as if this were not enough, the girl sets out deliberately to correct and cure the weakness of her destined partner. And, what is more, she does not hesitate to 'stoop' in order to 'conquer' her lover! Listen:

"But then reserved and sheepish; that's much against him. Yet can't he be cured of his timidity, by being taught to be proud of his wife? Yes; and can't I—But I'm disposing of the husband before I've secured the lover!"

Such a deliberate endeavour on the part of the one to cure the weaknesses of the other leaves no doubt as to the general principle we have enunciated as the basis of the human pair in the play of Goldsmith. Each of the prospective couple acts as a normalising agent in respect of the excesses of the other. What a sorry picture would be presented by a pair where each is equally shy, or worse still, equally forward!

The third example strengthens our position in so far as Hastings is shown as an extremely impetuous lover, impatient of prudential considerations in the realisation of his object. An admirable gesture of romantic ardour no doubt, but the world being what it is, such an attitude towards life has its own dangers. A world made up of such youths as Hastings is impossible. And so when Hastings declares in brave words:

"Perish fortune! Love and content will increase what we possess beyond a monarch's fortune. Let me prevail!"

Miss Neville's reply is sound and sobering:

"No, Mr. Hastings, no. Prudence once more comes to my relief, and I'll obey its dictates. In the moment of passion fortune may be despised, but it ever produces a lasting repentance."

How many a human pair has not found that it is sometimes too late to repent? And so the prudence and wordly sense of Miss Neville act as moral tonics to the hasty Hastings who wants just such a wife as he finally gets.

And what, meanwhile, shall we say about Master Anthony Lumpkin, of Blank Place? It would seem that Goldsmith was unable to procure for him a suitable match. There is an incurable excess of animal spirits in Tony, and he does not fit in with any scheme of rational values determining the destiny of the human pair in the play of Goldsmith. Tony is a character apart, *sui generis*. And so he is dismissed to his Bet Bouncer, but that is off the stage. His marriage does not fall within the plot of the drama. And, as we noted above, his case is an exception proving the rule. If the basis of the relationship of the human pair in Goldsmith is an endeavour to synthesise two apparently irreconcilable human temperaments, then it is easy to assume that such a synthesis is impossible in the case

of Tony Lumpkin. His love of liberty—or is it license?—is too strong to domesticate him. And the best that we can say of him is that he makes no secret of it. Listen:

"Then you'll see the first use I'll make of my liberty! (Taking Miss Neville's hand) Witness all men by these presents, that I, Anthony Lumpkin, Esqire, of Blank Place, refuse you, Constantia Neville, spinster, of no place at all, for my true and lawful wife. So Constance Neville may marry whom she pleases, and Tony Lumpkin is his own man again!"

But there is more to it than seems at first sight in this exception to the scheme of values in which Tony is found to be a misfit. In dismissing Tony, Goldsmith has pronounced judgement against himself. The incorrigibility of the one had a corresponding incurability in the other. Taught to be a 'machine of pity', as he admits in one of his essays, Goldsmith had developed in himself that misplaced generosity and want of wordly wisdom which could not make him a happy husband. There is a certain pathos in this self-condemnation which Goldsmith pronounces, as if in explanation of his bachelorship.

The term better-half, jocosely applied to a husband or a wife, seems to gain a peculiar significance when viewed in the light of what has been said in this paper. For, in effect, the position of the human pair in Goldsmith's play is determined by a choice in which each unit of the pair seeks its own better self. Human nature being what it is, men and women seek to complete their halves by agreeing to throw their lot in a common partnership of life. The ideal position of the human pair, according to Goldsmith, is thus seen to be that in which each acts as a sobering moral tonic in respect of the all too common shortcomings to which mankind is heir.

ON THE RIVER SINDHU OF THE *MĀLAVIKĀGNIMITRA*

B. S. Upadhyaya, m.a.

To vol. xiv, part 1 of the *Journal of the United Provinces Historical Society* I contributed a paper on the 'River Sindhu of the *Mālavikāgnimitra*.' As a result of my study of Kālidāsa I came across new data and was eventually constrained to 'return' to the subject of identification of the river Sindhu which had been considered as closed by the late Dr. V. A. Smith and some of his followers. From vol. xiv, part 2 of the same Journal I find that my paper has not found favour with Mr. J. C. Powell-Price, i.e.s., who has published a reply to my article in that issue.

Mr. Powell-Price's reply is an amusing reading. My learned critic is not only unable to controvert any of my conclusions but he has not even touched the premises of my structure. Literally every point has remained unaffected and consequently my identification of the Sindhu with the Indus remains intact. Indeed, I would doubt the very validity of my rejoinder to his article as my position remains absolutely unassailed. Even so, I would examine the credentials of his paper to see what they are worth. As a matter of fact, since it hardly touches the precincts of my conclusions, my task has been considerably lightened, and I may not be required to recount again the various data set forth in my last paper. I shall therefore meet the criticism point by point.

His first two sentences characterise my arguments as based on 'a somewhat twisted version of Professor Tarn's recent book on the *Greeks in Bactria and India*' and 'on an interpretation of the facts about the Greek occupation of the Punjab and parts of the Western United Provinces which is mere conjecture against the balance of the evidence.' This is simply untrue. Even a cursory perusal of my paper will prove that out of the seven lines of arguments it is but a single one in which Professor Tarn has been cited, controverted or followed. In fact I have followed his view in the context I have used his book which I have called 'a remarkable publication of recent years.' I have accepted the joint invasion of India by Demetrios and Menander and the separate one by Menander as also the progress of their marches and the fact of the latter's being the general and the son-in-law of the former, i.e. mostly all that

Tarn has to say on this point. Without caring to substantiate his remarks the critic adds that "Incidently the basing of a historical theory on a chance mention in a play written long after is much like an attempt to write the history of Denmark from references in Shakespeare's *Hamlet*. This point hardly deserves to be noticed. I am confident that Mr. Powell-Price knows it too well that the great savants of his own land and of the continent and those of India have since the days of Sir William Jones, their pioneer, built point by point the history of ancient India and have struggled to catch at a straw like this reference in the *Mālavikāgnimitra*. This 'attempt to write the history of Denmark from references in Shakespeare's *Hamlet*' has most certainly been made by Smith, Jayaswal, Mazumdar, and by his own unfailing historian Tarn, to quote just a few, all of whom have utilised this datum of the *Mālavikāgnimitra*. Undoubtedly all that we have in Indian history to-day is the result of but such failings. Indeed the learned critic is hardly aware with what force and tenacity the Indian traditions endure. And it is on these traditions, after separating the chaff from the corn, that the great Indologists, foreign and indigenous, have built Indian history piecemeal.

He further says: "In the first place Mr. Upadhyaya states that 'Smith confuses the invasion of Menander with that of Demetrios.' But Tarn has proved pretty conclusively that Menander was the general of Demetrios." Who doubts it? I have very willingly accepted this view of Tarn. But where does it lead my critic? How does it rebut my observation that 'Smith confuses the invasion of Menander with that of Demetrios'? How by becoming the general of Demetrios does Menander save Smith from the confusion which he has diffused over a number of chapters that I have discussed at length in my last paper? The confusion arises, inspite of Professor Tarn's proving conclusively Menander's relationship with Demetrios, from Smith's mistaking the invasion of Demetrios for that of Menander. Smith's theory with his entire chapter falls to the ground the moment we believe with Tarn that the said invasion was made by Demetrios. Mr. Powell-Price, it is strange, fails to see that Smith makes Puṣyamitra retire to Mathura on the thrust of Khāravela. Is it, if we follow Smith, that Puṣyamitra took refuge at Mathura, i.e. in the dominion of Menander, his inveterate political enemy who was conversing all the time with the Śuṅga emperor's sectarian cut-throats, the Buddhists (mark the *Milinda-Pañho!*), who ultimately brought him to invade the territory of the refugee? Smith's confusion is patent and to prove it doubly I would fain cite

his making Kābul the capital of Menander[1] in face of the evidence of the *Milinda-Pañho* when everybody else, including Mr. Powell-Price and Tarn, accepts Menander's capital to have been at Sākala! I have neither the time nor space to discuss fully the inexhaustible incidents of confusion arrayed in that chapter of Smith. Suffice it to say that if ever a revision of the *Early History of India* is undertaken this chapter will have to be wholly replaced. I wish Mr. Powell-Price had combated any of the numerous points which I have raised in course of five pages in my last article establishing the confusion of the eminent orientalist.

Further he finds fault with my dating of the Yuga Purāṇa of the *Gārgī Saṁhitā* in the first century B.C. This, he asserts, is 'without any real authority' and is 'pure assumption.' Perhaps. But he has hardly ascertained my authority, which, if he had cared, he could have easily done through Tarn himself. Fortunately my position is not peculiar and I can depend, for the concurrence with my view, on the opinions of a number of scholars. The late Dr. K. P. Jayaswal has agreed[2] with my 'assumption', and Dewan Bahadur K. H. Dhruva,[3] besides accepting the date for the Yuga Purāṇa as the first century B.C., has even contended for the same date for the entire compilation called the *Gārgī Saṁhitā*.[4] Kern had accepted the date[5] long ago in his Introduction to the *Bṛhat-Saṁhitā* of Varāha Mihira. Mr. Powell-Price has been much too impatient, indeed so impatient, that he has not cared to read the latter part of the sentence of Tarn, which he quotes, and which clearly shows Tarn's partial agreement with Dr. Jayaswals' dating. In order to show to the scholars as to who has 'twisted' Professor Tarn's views I am quoting below his opinion on the point of which only the parenthetical sentence enclosed within the brackets (which are Tarn's own) Mr. Powell-Price has cited: "The Gargī Saṁhitā is an astrological work of uncertain date (it has been dated anywhere from the Christian Era to the third century A.D.), one of whose chapters, the Yuga-Purāṇa, contains an historical account of (among other matters) the Greek advance to Pātaliputra, written as usual in the form of a prophecy. The existing texts of the Yuga-Purāna are written in Sanskrit with (it is said) traces of Prākritisms; in the opinion of the

[1] *Early History of India*, p. 239.

[2] *JBORS.*, 1928., Vol. XIV. Pt. 111. p. 399.

[3] Ibid., 1930, Vol. XVI. Ph. 1. p. 45.

[4] Ibid.

[5] *Bibliotheca Indica*, 1864-65, pp. 32-40.

late Dr. Jayaswal, who devoted special attention to this work, the extant account must go back to a historical chronicle (Tarn remarks here in a footnote: "The worthlessness of the other Purānas on the Yavanas (pp. 133 *n*.3 and 324 *n*.1) makes this, to me, *quite certain*], written either in Prakrit or in mixed Sanscrit-Prakrit, which he dates in the latter half of the first century B.C. on the ground that it mentions no dynasties later than the Sacas. Historians of India have usually considered the historical account of the Yavanas in the Yuga-Purāna as valuable, an opinion shared by Jayaswal, who regards the work as the earliest known Purāna and as exhibiting an independent tradition; occasionally someone has dissented from this view (and here Tarn disagrees with that view and its holder Dr. Fleet in a footnote), but the manner in which the accounts of the Greek Apollodorus and of the Yuga-Purāna complement each other (Chap. IV) ought to be conclusive for the Yavana sections, as the two are presumably independent."[6] I leave to the scholars to judge of the authenticity of my critic's statement. It may be noted that the main sentence which agrees with my view has been omitted and the parenthesis, occurring in the sentence, which refers to a different idea, has been quoted! Agreeing substantially with this date Prof. Tarn says elsewhere: "....Being embedded in an astrological work, it is given in the form of a prophecy; but the Yavana sections appear to reproduce an older document of the nature of a chronicle."[7] My observation regarding the first century B.C. date of the *Yuga Purāṇa* is borne out by Prof. Tarn's accepting the view of Jayaswal at yet another place. He remarks: "I have no doubt that Dr. Jayaswal was right (*JBORS.*, XIV, 1928, p. 398) in seeing behind these sections of the Yuga-Purāna a chronicle *written soon after the events described*, written by an Indian, and written in Prakrit, for the Sanskrit still has the form Dharmamita for Demetrios instead of Dharmamitra."[8] Thus the date that I have accepted for *Yuga Purāṇa* has been also substantially accepted by Prof. Tarn. Mr. Powell-Prince, it appears, has not comprehended the point at issue which is not the date of the *Gārgī Saṁhitā* but that of the Yuga-Purāṇa, a section of this astrological work, and which again not of the form as it is but of the Prakrit original on which its present metrical version in Sanskrit is based!

[6] W. W. Tarn: *The Greeks in Bactria and India*, p. 452.

[7] Ibid., p. 132 footnote 3. Cf. also "The author of the original document-or chronicle which must stand behind the Yavana sections of the Yuga purāna," etc.

[8] Ibid., p. 378.

I have nowhere confused the invasion of North India with that of the Middle Country by Demetrios, as my critic thinks. I have nowhere even referred to the Greek invasion of North India. The logic of my talk has always centred round the Greek invasion of the Middle Country as is proved by the *Yuga Purāṇa* and other evidence. I have certainly taken as established the fact of the Hathigumpha inscription containing the name of Demetrios. Dr. Jayaswal's reading of the epitaph[9] is quite convincing. Of *Dimita* the letter *di* had already been independently read by Mr. R. D. Banerji,[10] *mi* was easily read and *t(i)* was later traced by Dr. Jayaswal. Dr. Sten Konow and Mr. Banerji readily accepted the reading[11] as many other scholars have done since. Even Tarn says: ".... in the Yuga-Purāṇa it is Demetrios who is supreme at Pātaliputra, in the Hāthigumpha inscription (if it really bears on the matter) it is Demetrios who orders the withdrawal, and in the Mahābhārata, while Demetrios and Apollodotas appear as kings of the Yavanas, Menander is not mentioned."[12] He further says that 'of recent years this inscription has been supposed to contain, *and may contain*, a reference to Demetrios."[13] The reading *Yavanarāja* is accepted almost universally. Dr. Sten Konow says of his own reading: "I can see Yavanarāja, as read by Mr. Jayaswal, and of his Dimita the *ma* is quite legible."[14] Dr. Jayaswal was convinced that 'Dimit (a or i) is the text.' He further wrote: "The words which had been subject of controversy have been specially studied, some for days and some for weeks. I have had no bias, no presumption of correctness in favour of my own former readings. My one object has been to reach the truth—the original writing and the real meaning."[15] The truth of this observation is inviolable. For months the great scholar worked on his decipherment and his unceremonious departure in his subsequent readings from each of his former ones will bear him out. The fact is that if the reading *Yavanarāja* is accepted, the concourse of historical facts independent of the inscription would warrant the name of Demetrios despite the illegibility of a few letters occurring just after the word *Yavanarāja*. Who could this Yavanarāja be? The *Yuga-Purāṇa* and the Greek evidence are at one in pointing to

[9] *JBORS.*, 1927, Vol. XIII. Pt. III-IV. pp. 221-46.

[10] ibid., p. 228.

[11] ibid.

[12] *The Greeks in Bactria and India*, pp. 166-67.

[13] ibid., p. 457.

[14] ibid.

[15] *JBORS.*, 1927, Vol. XIII, Pt. III-IV, p. 237.

Demetrios. It *cannot* be Menander for he never reached Pāṭaliputra. Therefore the reading *Dimita* standing for the Greek king Demetrios has to be accepted as occurring in the Hathigumpha inscription. As to the importance and historicity of the *Yuga Purāṇa* I refrain from saying more for much has been written regarding them by competent authors.[16]

My learned dissenter is too wilful in reproducing my statements. He takes great liberties with the text. He says, for example, that "He (i.e. I) further takes Plutarch's statement that Menander died in camp to mean that he was fighting against Pushyamitra on the Indus." Mark the word Indus! How could I make this illogical statement? It is a matter of commonsense logic to say that when two enemies proceeding respectively from the east and west meet, they certainly would meet between them, and the one coming from the east could never meet that coming from the west beyond him and on his rear. I am constrained to quote my own words: "Then there is another move towards the east, *probably under Menander*, swords are unsheathed, steel cracks under steel, *may be nearabout Sāketa*, and the East meets the West. There is a storm and then a consequent lull: the beaten foreign divisions decamp in disorder. And if we are to believe Plutarch that Menander died fighting in camp, who could indeed his invincible inveterate enemy be but Puṣyamitra?"[17] I should like to know where the word Indus occurs in my expression. As a matter of fact even the location of the battle-field has been hinted at in the phrase, 'may be nearabout Sāketa,' and I wonder how this has escaped the notice of my critic who has replaced it with the word 'Indus.' If we rely on the late Mr. Rhys David's translation, we can still more clearly read Plutarch reported thus: "He (Menander) died *in camp in a campaign against the Indians in the valley of the Ganges*."[18] Happily 'the valley of the Ganges' is nearer Sāketa than the Indus. After having distorted my sentence Mr. Powell-Price reproaches me: "Surely geography and historical probability have never been so sacrificed." Well! I shall not retaliate my critic in the same effable key.

"That Menander held Mathura and the west of the present United Provinces is pretty clear." And who denys it? But how long? Only so long as he lived, and, to quote Theodotus

16 Jayaswal, in ibid., 1928, Vol. XIV. Pt. III. p. 398; Dhruva in ibid., 1930, Vol. XVI. Pt. I. p. 18.

17 *JUPHS*. p. 13.

18 Introduction to the *Milinda Pañho*—Questions of King Milinda—where Rhys Dvids quotes and translates Plutarch.

on Pompeius, 'A dead man does not bite.' "That a Sunga army could have got past this to his capital of Sāgala and then on to the Indus is impossible even if they had been mechanised." Why not, if according to Plutarch, Menander had died fighting against Indians (under Puṣyamitra) in the valley of the Ganges? In my previous article I have given numerous data to bear out the fact that Menander *had* died fighting leaving behind his son, a child in the arms of its mother acting as regent, and I do not want to encumber this rejoinder with repetitions. He contends further the Indus having ever had a south bank. In 1925 itself Dr. R. C. Mazumdar[19] had pointed to the probability of the Indus having a southern bank. But may critic eggs one on to making even a bolder hazard still less agreeable to him that Vasumitra may even have crossed over to the other bank of the Indus. Naturally the Greeks may have been gathering across the river and waiting for the aggressor to attack them there as Porus had acted with regard to Alexander across the Jhelum. After all, what is there to militate against the phrase *dakṣiṇarodhasi* being translated as the 'right bank' which would lie on the outer side of the Indus? There is not a jot of evidence weighing to the contrary. Mr. Powell-Price adds, "But apart from this the story is quite impossible." But where are the contender's credentials to support his contention?

Then the learned critic evidently never having himself looked into the details of Dewan Bahadur Dhruva's emended text in the original and having based his conclusion on a second-hand information furnished by Tarn, tries to make capital out of an expression of humility and finds fault with my accepting a word of the reconstructed text! I must plainly say that I have not the least idea to defend Dhruva's text, although undoubtedly the text will have to be amply reconstructed for out of 114 lines only 12 are correct, the rest 102 being hopelessly corrupt. Yet the balance of my acceptance regarding the text is clearly in favour of Dr. Jayaswal's reading. I have only tried to 'give unto Cæsar what is Cæsar's' and have therefore referred to Dhruva's text. What harm if after this I make the inevitable statement, which my critic cites, that "Vasumitra overran the vast tableland of the Aryāvarta and swept past the kingless capital of Sākala and crushed the challenge of the gathering Greeks in a bend of the Indus, the Sindhu of our text?" Vasumitra could well have done it when the strong arm of Menander, he having been killed in action, had been removed from Sākala and the western U. P., when the capital lay at the mercy of any chance adventurer and when the sceptre

19 *Indian Historical Quarterly*, 1925, pp. 214 ff.

had passed to the feeble hands of a woman acting as the regent for her child in arms. That the Middle Country had been evacuated by the Yavanas is evidenced by the Hathigumpha inscription, the *Yuga Purāṇa*, the Greek historians (for Demetrios is represented as having withdrawn all his forces from India to meet the recalcitrant Eukratides who had revolted and taken possession of his home) and this has been partly accepted by Prof. Tarn himself. He says : "Wherever Demetrios was, he ordered Menander to abandon all the Middle Country south of Mathurā.." But the most convincing proof comes from Patañjali's *Mahābhāṣya*, a contemporary work. While discussing the Pāṇinian sūtra *Śūdrāṇāmanirvasitānām* Patañjali instances that the Yavanas (as also the Śakas) were residing outside the Āryāvarta ; and he gives the boundary of the Āryāvarta. This is very significant. There was a time when the same grammarian instanced the sieges of Sākala and Mādhyamikā by the Greeks in almost an immediate past and the same now refers to them as 'at present' living outside the limits of the Āryāvarta. The interim accounts for the revolt of Eukratides, the withdrawal of the Greek forces from India, and the move of Menander to the east and his consequent overthrow and death. I am inclined to take the *Mahābhāṣya* reference as made subsequent to the second Aśvamedha of Puṣyamitra and alluding to a time posterior to the fall of Menander and to the final victory of Vasumitra when the emperor had already established that the dominions of his fallen foe were his by right of conquest. And when once the Āryāvarta had been cleared of the Yavanas there was surely nothing to withstand the hurricane raised by the marches of Vasumitra and to prevent him from overrunning the tableland of Āryāvarta and reaching the river Sindhu, the Indus. It must be the Indus, for beyond the Āryāvarta there could lay no river bearing the name Sindhu except the Indus.

Then my critic has accused me of having brought in the evidence of the *Aśokāvadāna*, which, he asserts, 'is not serious history.' And, pray, what is serious history in Sanskrit literature ? Are Pāṇini, Patañjali, the Jātakas, Purāṇas and myriads of other works serious history on which Pārgiter, Wilson, Keith, Jayaswal, Levi, Bhandarkar and Mookerji have built?[20] Surely then they have built the foundations of Indian history on extremely insecure grounds and with dubious material, and have indeed wasted their labour. May I point out that had India possessed a serious history there would not have been the need of attempting one, nor the necessity of a reply by Mr. Powell-Price, nor again that of a rejoinder by the present writer ?

There is nothing wrong in my bringing in the evidence of the *Aśokāvadāna* when I find that it has been extensively utilised along with the *Yuga Purāṇa* by Professor W. W. Tarn himself. As to the fact that the *Aśokāvadāna* alone refers to Sākala as having been under the possession of Puṣyamitra it may be pointed out that although this is an isolated instance, it is a capital proof. Firstly, one would like to know as to which other works record, or can relevantly record, the instance; secondly, the fact that this story has not been supported by other evidence elsewhere stands discredited as we connot be sure if all ancient literature is available to us. I may also add that the reference of Patañjali to the Yavanas living outside the limits of the Āryāvarta after they had held and evacuated the Middle Country, as has been mentioned above, directly supports the version of the *Aśokāvadāna*. Finally, the most important fact that arises out of the reference of the *Avadāna* is that the work belongs to a sect deadly opposed to Puṣyamitra and naturally therefore an account of his rule extending over a vast area would indeed be out of place. Such a work contains an allusion to Sākala as being in Puṣyamitra's possession. When an accused pleads guilty and works his own discomfiture there is no reason why he should not be readily believed, for to defeat his own interest is hardly the nature of man.

The above discussion will amply prove that my critic has utterly failed to make out even a tolerable case for his reply because he has hardly touched the main arguments of my paper. My conclusion that the Sindhu of the *Mālavikāgnimitra* is the same as the Indus stands therefore. It is a pity that the critic has misquoted Tarn and half-quoted me and has even taken liberties with my expressions which he has replaced with his own. I might as well remind him that evidence whether single or several is important, and that its importance lies not so much in its isolation or multiplicity as in its plausibility and relevancy to facts. I beg to be excused the temerity of further adding that past events are completed and sealed and are sacred; they may not conform to the distinct whims of humanity, but they cannot be altered to suit tempers for they are immutable. The fall of a Menander or the success of a Puṣyamitra cannot be the personal concern of the historian. The misfortune of the vanquished and the affluence of the victor will have to be noted and accepted, and, where not palatable, will even have to be swallowed as decreed facts.

TENANCY LEGISLATION IN UNITED PROVINCES

B. R. Misra, M. A., Ph. D. (London), LL. B.

Introductory

The greatest social and economic question of the day in India is the peasant problem. Throughout the nineteenth century and even to-day, in land settlements, the interests of the landlords predominated and little attention was paid to the welfare of the peasantry. No doubt any legislation in connection with agrarian matters, intimately affecting the interests of so many different classes, is necessarily difficult and contentious; but the strongly organized body of the landlords and *Talukdars* made it exceedingly difficult for the Government to pass any legislation to which their free consent could not be obtained. With the establishment of British rule the landlord's position became very strong as it had never been before. The result has been that tenancy legislation has always aimed at a compromise in which the tenants have been the greatest sufferers. The Agra Tenancy Act (1926) and the Oudh Rent (Amendment) Act (1921) were half-way measures and in their working several important defects were noticed. It became evident that unless some of their provisions were radically changed, the condition of the peasantry would become worse with the passage of time. The Congress Government, soon after it came in power (1937), set up an expert committee to make changes in the Tenancy Acts of the province. The United Provinces Tenancy Bill was introduced in the Legislative Assembly on April 20, 1938 and, after very heated debates, was passed by both the Houses of Legislature on October 4, 1939. It received the assent of the Governor on December 6, 1939 and became the United Provinces Tenancy Act (XVII) of 1939.

The United Provinces Tenancy Act (1939) has repealed the Agra Tenancy Act (1926) and the Oudh Rent Act (1921). Thus it applies equally to the zamindars of Agra and the Talukdars of Oudh. The Act has removed the long standing anomaly of two tenancy legislations in two parts of the same province which historically, culturally, and economically are not different. In this paper, the defects of the Agra Tenancy Act (1926) and the Oudh Rent Act (1921) will be pointed out. Secondly, a description of the fundamental features of the present Act will be given. Finally, an account of the post-War land reforms

in Eastern Europe will be described and its lessons for India pointed out.

Statutory Tenants

Previous to the passing of the Agra Tenancy Act (1926) the right of occupancy could only be acquired by continuously cultivating the same land for a period of twelve years. In Oudh the right of occupancy under the terms of the Oudh Compromise (1865) could never be acquired by a mere lapse of time. The twelve years' rule of the Agra province had its origin in the Act X of 1859. It undoubtedly was the most mischievous rule in the whole body of the Act. The backbone of the peasantry was completely broken under the working of this rule. It caused a revolution in the Indian land system by completely removing the immemorial customary rights of the tenants from which alone occupancy right could arise. Efficient agriculture was an impossibility when the fear of ejectment was hanging over their necks like the sword of Democles.

The scheme of statutory tenancy was first introduced in the Oudh Rent (Amendment) Act (1921) and was afterwards extended to the Agra province by the Agra Tenancy Act of 1926. In Oudh the statutory tenants had a life-tenancy subject to a revision of their rents after the expiry of every statutory period of ten years. In Agra most of the non-occupancy tenants were given life-tenancy. The heirs of the statutory tenants had the right to hold the land for a period of five years after the death of the statutory tenants.

The creation of statutory tenants giving them a life-tenancy was an important step forward in the history of tenancy legislation in these provinces. It gave the cultivators a greater security of tenure during their life time. It put an end to seven or ten years' lease system for cultivators which was a common feature of non-occupancy tenancy in these provinces before it.

Defects of Statutory Tenancy

But statutory tenancy was open to one serious limitation. Life-tenancy is incompatible with any permanent advance in the methods of agricultural progress. The policy of 'after me the deluge' is fatal to the progress of an individual as well as to society. Human nature cannot accept a great sacrifice for a mere temporary gain. The possession of land for a single life is not sufficient in India, where people have more regard for their sons and grandsons than for themselves, to induce them to invest any considerable amount of capital and labour

in the improvement of land. Hence any system of tenancy reform which tends to threaten the source of livelihood of the family on the death of its head cannot but be regarded with extreme disfavour.

The result was that while the tenant was protected during the currency of his tenancy his heir was not protected at its termination. When a tenancy was terminated by the death of the tenant the landlord was at liberty to dispose of the holding on whatever terms he liked. Once then in every generation the whole of the land in the province, held by statutory tenants, was let under conditions of unrestricted competition. Taking the average duration of a life-tenancy at 20 years, one-twentieth of the land of the province, on an average, was at the disposal of the landlords each year. The pressure of population on land is already excessively heavy in the villages. A system of tenancy terminable with the life-time of the tenant led to a rush for a holding whenever one fell vacant.

Classes of Tenants under the Act

Hence, the United Provinces Tenancy Act (1939) has replaced Statutory Tenants and the Heirs of Statutory Tenants by Hereditary Tenants. The following classes of tenants are recognised in the Act :—

(1) Permanent tenure-holders.
(2) Fixed-rate tenants.
(3) Tenants holding on special terms in Oudh.
(4) Expropriettary tenants.
(5) Occupancy tenants.
(6) Hereditary tenants.
(7) Non-occupancy tenants.

Hereditary tenants form the new class of tenants created by the Act. They form the most important class and occupy the largest percentage of area in the province. In Agra the statutory tenants and the heirs of statutory tenants, who cultivated merely 25 per cent (i.e., 73,48,172 acres) of the total cultivated area in the province under the Act of 1926, have acquired hereditary rights. Some non-occupancy tenants, have also acquired this right. Similarly, in Oudh the statutory tenants and the heirs of statutory tenants who cultivated nearly 70 per cent of the total cultivated area in the province (i.e., 69,56,422 acres) under the Act of 1921, have become hereditary

tenants. Briefly, the hereditary tenants include the following classes of tenants[1] :—

(1) Statutory tenants, including *pahi-kasht* tenants, who were liable to ejectment under Section 62-A (Clause-e), of Oudh Rent Act, (1921).

(2) The heirs of statutory tenants.

(3) Tenants in Oudh who could not acquire the rights of statutory tenancy under the provision of Section 67(b) of the Oudh Rent Act, (1921).

(4) Tenants in Oudh holding land specified in Schedule D to the Oudh Rent Act (1886) unless such land is exempted in Section 30.

(5) Tenants in Agra who held land from permanent tenure-holders before the passing of the Agra Tenancy Act (1926) and were tenants at the time of the passing of the Act (1939).

(6) Tenants of tea estates, which had been notified under Act II of 1926, but which have not been notified under Section 30, (Sub-section 5), of the Act (1939).

As a result of the creation of this new class of tenants, the statutory tenants and heirs of statutory tenants in Agra and Oudh have become hereditary tenants. Their holdings are heritable and their tenancy rights do not terminate with the death of the tenant. They cannot be ejected by the landlords. Their rents can only be increased under the provisions of Section 110 which provides rules for the framing of standard rates for hereditary tenants.

It is a cardinal principle of agricultural economics that the most essential needs of a tenancy are : fixity of tenure and fair rents. The creation of hereditary tenancy has satisfied these two essential conditions and has placed before the tenants rights and independence which they never enjoyed before. It is unfortunate that in early years of British rule, partly on account of ignorance and partly on account of political troubles, new rights in property were instituted. It is, however, important to point out that the rights of proprietors of land cannot be the same as those of the owner of a chattel or a commodity. They are always subject to the implied obligations of securing the cultivation of land for the support of the nation and of granting enough security to the cultivators to maintain them on the

[1] The area held by occupancy tenants in Oudh is 1,15,068 acres, that is, just a little over 1 per cent of the total cultivated area in Oudh.

soil. The fact is that State control, both of the activities of the landlord and the peasants, for the benefit of the nation, is necessary. When population was sparse a village code of local customs and traditions had developed and afforded a safeguard to the peasants. But they do not afford enough protection now. Hence, legislative protection and State control are the only methods of safeguarding the general public interest. Let us hope that the hereditary tenants who form the bulk of the tenants in the province will place agriculture on a sounder, healthier and more remunerative basis.

Sir Lands

The Agra Tenancy Act and the Oudh Rent Act provided for a considerable increase in the *sir* area of the zamindar or the Talukdar. In Agra a graduated scale was introduced according to which a landlord could acquire sir up to a certain percentage of his proprietory interest in the *mahal.* Landlords or permanent-tenure holders, having not more than 30 acres of land, could acquire sir to the extent of 50 per cent of their area; but if the area exceeded 30 acres and was less than 600 acres, not more than 15 per cent of the area could be acquired as sir land. In Oudh there was no such graduated scale and the sir area could not exceed one-tenth of the total cultivated area of the village.

The increase in sir area must inevitably mean that a number of families will cease to be statutory tenants, and will either be dispossessed or reduced to the position of non-occupancy tenants. There was nothing in the Act to prevent the landlord from taking into his possession much of the *gauhan* (lands near the village) in the village which, generally does not amount to more than 10 or 15 per cent of the total cultivated area. Similarly, he could gradually take into possession much of the irrigated portion of the village. The result was that while the the Acts granted rights to tenants, they provided means for those rights to be taken away.

Further, the Acts imposed no restrictions on the subletting of sir. And as no occupancy or statutory right could accrue in sir, the tenant cultivating the sir of the zamindar remained a non-occupancy cultivator. Sub-letting is no less vicious in the case of a landlord than in the case of a tenant. A landlord may reasonably be given all the land which he requires for his own cultivation, but he should not be allowed to retain land as sir simply with the object of sub-letting it at a rack-rent. The tendency throughout the province is for the

landlords to cultivate their *Khudkasht* (lands cultivated with their own labour and capital) and sub-let their sir. The increase in Khudkasht and sir is shown in the following table[2] :—

Agra			Oudh		
Year	Khudkasht (acres)	Sir (acres)	Year	Khudkasht (acres)	Sir (acres)
			1921-22	..	4,22,673
			1922-23	3,09,722	4,29,562
			1923-24	3,27,218	4,89,128
			1924-25	3,32,144	5,05,253
			1925-26	3,49,022	5,33,825
1926-27	2,93,248	33,55,688	1926-27	3,54,864	5,38,959
1927-28	3,94,247	33,52,294	1928-29	3,63,249	5,52,314
1928-29	4,75,032	33,96,739	1929-30	3,67,418	5,53,205
1929-30	5,96,642	34,87,061	1930-31	3,75,172	5,84,868
1930-31	6,99,381	34,62,391	1931-32	3,88,636	5,97,334
1931-32	8,44,405	35,05,318	1932-33	4,05,849	6,10,778
1932-33	9,09,264	34,71,679	1933-34	4,11,871	6,07,612
1933-34	9,60,606	34,37,416	1934-35	4,06,963	6,06,114
1933-34	9,60,606	34,37,416	1934-35	4,06,963	6,06,114
1934-35	10,11,299	34,01,815	1935-36	4,06,956	6,15,876
1935-36	10,77,843	33,76,625	1936-37	4,08,900	6,13,458
1936-37	11,63,189	33,73,515	1937-38	4,26,370	6,11,597
1937-38	12,25,559	33,63,725	1938-39	3,43,747	6,17,059
1938-39	12,96,535	33,76,400	1938-39	3,67,278	6,34,483

Sir Provisions under the Act (1939)

An attempt has been made in the present Act to remove these defects. The basic principles underlying the Act are that (i) the area of sir should be reduced to a minimum ; and (ii) sub-letting of sir should not be permitted. With this end in view the landlords of the province have been divided into two classes : (*i*) those assessed to a land revenue of Rs.. 250 or less per annum (to be called hereafter the smaller landlords); and (*ii*) those who pay more than Rs. 250 annually as land revenue (to be called the larger landlords).

The reason for this differentiation in the sir right between the smaller and larger landlords is based on economic grounds. In the case of the smaller landlords the income which they derive

[2] Compiled from *The Annual Reports of the Board of Revenue, United Provinces.*

from cultivation represents a far larger share in their total income than is the case with the larger landlords. In some cases, it is practically their only source of income. The case of the larger landlords is different. Their income from cultivation forms a comparatively small proportion of their total income and their economic position is based on their proprietary rights rather than on the rights to cultivate sir. The Act (1939) has made the following important changes in the rules regarding sir lands :—

(1) *Sir* acquired by larger landlords under the Agra Tenancy Act (1926) has ceased to be sir. This is a very important provision. It has rectified the fundamental defect of the sir provisions of the previous Acts under which the landlords acquired a larger area, not for the purpose of self-cultivation but for sub-letting.

(2) *Sir* of the smaller landlords acquired before or after the Agra Tenancy Act, (1926) or the Oudh Rent Act, (1921) shall continue to be sir under this Act. The object of this differentiation is that the smaller landlords need sir for purposes of genuine cultivation and not for sub-letting.

3) *Sir* of the larger landlords acquired before the Agra Tenancy Act (1926) and the Oudh Rent Act (1921) which is not sub-let, whatever its area, continues to be sir under the present Act (1939).

(4) But if the total area of the sir (under clause 3 above) both cultivated by the landlord and sub-let, exceeds 50 acres, and the area which is sub-let does not exceed 50 acres, the whole of the self-cultivated sir, together with so much of the sir let out as would make 50 acres, would be sir under the Act.

(5) If the total sir area (under clause 3 above) both let and un-let is less than 50 acres, the whole of it shall be sir under the Act.

(6) There should be no further accrual of sir either in the case of larger or smaller landlords.

(7) Tenants who were cultivating sir lands under the previous Acts, but which has ceased to be sir under the Act (1939), shall acquire the right of hereditary tenants in such lands.

(8) If a landlord has Khudkasht land in addition to sir, the Khudkasht can be converted into sir area, provided hereditary rights are conferred upon tenants for an equal area of sir, who would otherwise be deprived of such rights under the 50 acres rule (clause 4 above).

The effects of the above provisions relating to the sir lands may briefly be summarised thus :—

(1) The sub-letting of sir has been put to an end. The tenants of sir was often rack-rented and had always a precarious existence. The conferment of hereditary rights over such lands has increased security of tenure and stabilised rents.

(2) The future accrual of sir has been stopped. This would mean an increase in the area cultivated by hereditary tenants.

(3) The distinction between the smaller and larger landlords has strengthened the economic position of the former who are genuine agriculturists in a large number of cases.

(4) The restrictions imposed on the sub-letting and future accrual of sir rights would ultimately encourage landlords to take to agriculture. This would improve their economic position and stimulate agricultural improvements. Perhaps one of the most important reasons for the present backward condition of agriculture in India is that the landlords have not taken to agriculture as a profession. The application of larger resources and intelligence by landlords to agriculture would place it on a business footing. In the long run, the yield from agriculture would increase and it would not be a 'depressed industry.'

Determination and Modification of Rents

The Act has laid down definite and important rules for the determination of rents for hereditary and occupancy tenants. The rules for the remission of rents and revenue have also been given a statutory form in the sixth Schedule to the Act. The more important provisions regarding the determination and modification of rents will be described here.

When a tenant is admitted to the occupation of land, the initial rent may be agreed upon between him and his land-

lord. Rent once agreed upon, shall not be enhanced or abated unless :—

(1) A period of ten years, or such longer period as may have been decreed or ordered, has elapsed.

(2) The period of the Settlement of the local area in which the holding is situated has come to an end.

(3) The area of the tenant's holding has been increased by alluvion or decreased by diluvion.

(4) The productive powers of the land held by the tenant have been increased by fluvial action, or by an improvement effected by the landlord; or decreased by causes beyond control.

The Act further contemplates the fixation of standard rates to which all rents must, ultimately, conform. The basis of such rates for hereditary and occupancy tenants are laid down in Section 110. The rent-rate officer in determining such rates shall take into consideration :—

(1) The level of rents paid by tenants who held or were admitted to land at different times, and in particular the level of rents agreed to by tenants who were admitted to holdings in or between the years 1309 and 1313 *Fasli.*

(2) The prices of agricultural produce prevailing at such times.

(3) Changes in the crops grown and in the amount of the produce.

(4) The value of the produce with a view to seeing that the valuation of the holdings of hereditary tenants at the proposed rates does not exceed one-fifth of such value.

(5) The expenses of cultivation, and the cost to the cultivator of maintaining himself and his family.

In Agra, the rates for occupancy tenants would be framed on the basis of the rents actually paid. In Oudh the rates for occupancy tenants shall be two annas in the rupee less than the corresponding rates for hereditary tenants.

These standard rates shall be taken into consideration when the question of abatement, enhancement,or communication of rent arises. The rent of tenants (with the exception of the permanent tenure-holders and fixed-rate tenants) is liable to abatement on one or more of the following grounds :—

(1) That the rent payable by the tenant is substantially greater than the rent calculated at the sanctioned rates appropriate to him.

(2) That the productive powers of the land have been decreased by an improvement made by the landlord or by any cause beyond the tenant's control during the currency of the present rent.

(3) That the area of his holding has been decreased by diluvion or by an encroachment or by the taking up of land for a public purpose.

(4) That the rent is liable to abatement on some ground specified in a lease, agreement, or decree which he holds.

The rent is, likewise, liable to enhancement on any of the following grounds :—

(1) That the rent payable by the tenant is substantially less than the rent calculated at the sanctioned rates appropriate to him.

(2) That the productive powers of the land held by the tenant have been increased by fluvial action.

(3) That the productive powers of the land held by the tenant have been increased by an improvement by or at the expense of the landlord.

(4) That the area of the tenant's holding has been increased by alluvion.

Finally, the Act has made provisions for the remission or suspension of rent and revenue during times of agricultural calamity. The following scale of remission has been provided for in the Act :—

Loss measured in annas per rupee of normal produce	*Relief in rent per rupee*
Amounting to 8 annas but not amounting to 10 annas	6 annas
Amounting to 10 annas but not amounting to 12 annas	10 annas
Amounting to and exceeding 12 annas	16 annas

In conclusion, it may be said that the present provision regarding the determination, modification, remission, and suspension of rents and revenue are of a far-reaching character. The standard rates shall, to a large extent, put an end to the problems of rack-renting and excessive enhancement at frequent

intervals. The dependence of the rent of hereditary tenants on the expenses of cultivation and the cost of the cultivator in maintaining himself and his family shall lighten the pressure of the rentals. The provision that the rent should not ecxeed one-fifth of the value of the produce shall co-relate rents with cost of production. No doubt, it would often be difficult to translate these provisions into practice with mathematical precision, nevertheless, a generous Settlement Officer shall make liberal allowances for such rules. Finally, before the passing of the Act, the rules regarding the remission and suspension of rents and revenue were entirely dependent on executive action, which often led to controversy and acute differences of opinion.

It would be beyond the scope of this paper to examine in detail the controversy which raged round the tremendous fall in prices and the remission and suspension in rents and revenue granted by the Government during 1929-35. Here it may be remarked that the liberal provisions regarding suspension and remission in revenue shall, in future, be quickly put into practice and prices, rents and revenue would be regulated without much difference of opinion and difficulty.

Miscellaneous Provisions

Finally, we may briefly refer to some other important provisions of the Act which cannot be described in detail. Regarding payment and recovery of rent, the Act has provided that in future all receipts for rent must be granted on a printed form sold by the Government. A landlord who habitually fails to grant receipts is liable to a fine or imprisonment. A decree for arrears of rent may be executed by the sale of the interest of the tenant in whole or a portion of the holding. The tenant, however, cannot be arrested under the decree. The Court is also empowered to lease the holding for a maximum period of six years to any person who pays the amount outstanding in the decree.

The Act has allowed all the tenants (except non-occupancy) to sub-let for five years and to sub-let again after expiry of a period of three years. The landlord's right of acquisition has been restricted to five acres for a house, a garden, or a grove. The compensation payable for land so acquired has been increased. Regarding improvements the principal change in law is that the tenant or a sub-tenant has the right to construct on his holding a residential house or any other building serving agricultural purpose without the permission of the landlord. Hereditary tenants are given the right to make any improvement

other than the construction of buildings in the immediate vicinity of their holdings or the construction of tanks.

Lessons from Agrarian Settlement in post-War Europe

Having briefly described the various changes brought about by the United Provinces Tenancy Act, (1939), we now pass on to a study of the lessons for India from the agrarian settlement in post-war Europe. Among the various social effects of the last Great War perhaps the most important, and certainly the least expected, was the downfall of the large class of landowners and the renaissance of the peasantry as a social group in Europe. This social revolution has been active throughout the Continent and marks the death-knell of landlordism there. The principle has penetrated even into Great Britain—the last stronghold of 'landlordism.' The peasantry has been freed from feudal servitude not by paying one lump sum of money, as in previous reforms, to the landlord but by a wholesale process of expropriation forcibly imposed either by the State or revolution. This profound change in the status of the peasantry has been brought about by the alteration in the view which regards property not as a subjective right but as a social function.

Property was the foundation stone of the 'Natural Order' of the Physiocrats. Property was defended as the most sacred of rights. It was treated as a 'divine institution.' The American Constitution and the French Declaration of the Rights of Man both treated property as one of the fundamental rights which Government must protect. The great individualists from Locke to Turgot, Adam Smith, and Bentham, all reiterated in different language that rights of property were absolute and unconditional. *The rationale* of private property was that a man must reap where he has sown. Adam Smith wrote in defence of offering protection to property. But he also expressed the view that property sometimes is merely the result of usurpation. The "Wealth of Nations" contains the sentence that "landlords, like other men, love to reap where they have never sowed." The angle of vision, however, has altered considerably during the last half century with regard to landownership. Increasingly, under the pressure of philosophical and political criticism, property has come to be regarded as a social function and not as an absolute individual right. Under the stress of war conditions when every State curtailed the property rights of its citizens, even in the field of consumption by enacting sumptuary laws, whenever its needs were pressing, the new conception of property received a tacit and definite recognition.

The entire agrarian reform of the post-War period in Eastern Europe is based upon this new and progressive conception of property. The character of the reforms was mostly determined by the social needs of different countries. Three distinct types, however, are noticeable in the various reforms passed on the Continent. At one extreme is Russia, which has done away with large property with no compensation to the former owners. Then in most of the countries bordering on Russia as well as Yugoslavia and Czechoslovakia the greater part of the large estates has been divided among the peasants—the former owners received compensation, but always less than the actual value of land. Finally, in Central and Western Europe—Austria, Hungary, Germany etc.—the reforms have merely aimed at facilitating the expansion of peasant farming. Land has been purchased by the State for the peasants at current prices and distributed among them according to a 'working norm.' The reforms everywhere mark the fall of the landlords and the triumphant emergence of the peasants.

The effects of these land reforms are full of significance. A mere description of their provisions would not suffice. We have to study the deeper implications of these changes.

Land is the chief national asset of a country. The Government, the landlords, and the cultivators are in different degrees the custodians of the national wealth. No one party can be allowed to remain a trustee and receive a remuneration without performing economic services for the advancement and development of national resources. A close examination of the changes in landownership during the last fifty years shows that land is passing more and more into the hands of rent-receivers and speculators. There has been a mushroom growth of absentee landlords who are not performing social and economic services commensurate with the profits which they receive from land. The evils of absenteeism, management by unsympathetic agents, rack-renting and sub-letting through a chain of inferior proprietors are present in varying degree in most parts of the country. Tenants are often regarded as money investments. Landlords own property not as a means of work but as an instrument for the exercise of power or exploitation. This divorce of ownership from work must be removed and the landlords must be taught the obligations of ownership. It is thus only that the present features of agrarian unsettlement, which are undermining the foundations of the rural welfare, can be removed.

ATHARVAVEDIC CONCEPTION OF THE MOTHERLAND.

R. B. PANDEY, M.A., D.Litt.

The conception of the earth as mother is very old. The idea is based on human analogy. The human child, for its birth and nourishment, presupposes its parents and requires a nursing mother. Similarly the creatures of the world, as a whole, must be provided with common parents for their creation and maintenance. The conception of 'Father Heaven' can be traced back to as early as the Indo-European period. Zeus-peter (Jupiter) was regarded as the father and leader of all the heavenly beings. During the Ṛgvedic times this idea was further developed and the Earth (Pṛthivī) and the Heaven (Dyauh) were conceived to be the parents of gods moving in the firmament. They were called Devaputra (whose children are gods, and were invoked together in the following way:

> "Bring these two parents ancient born for worship,
> With the newest praisesongs to the seat of Ṛta.
> Come Heaven and Earth, with all the heavenly people,
> Hither to us, for great is your protection."[1]

But though the gods, who took their birth in the sky, were provided with metaphorical parents, the human beings, as a whole, did not stand as yet in the need of any figurative or universal parentage. The reason is that the human child is very closely connected with its parents. They are such concrete realities to it that it would not trouble its imagination to fancy a figurative origin of it. Again, humanity while divided into small groups and confined to small localities could not adopt a general and wide view of an extensive plot of land. An individual does not require a motherland. It is a big community or people that need it. The communal consciousness breeds a common motherland. Even a communal life, however, cannot form an adequate substratum of the conception of the motherland, because we find in the history of the world that during the nomadic and pastoral stages of civilization there were peoples without motherlands. The conception of the motherland requires a long association of a particular people with a definite tract of land, when their history and tradition must grow, their economic and political interests must be bound with it and they must develop slowly and unconsciously a deep

[1] *Ṛgveda*, VII, 53.

sentiment of love, respect and service for it. The Indo-Aryans in their early career were migrating from place to place, and though they had racial and communal consciousness, they had not a motherland. Their religion could develop, as it had its theatre in the sky, but patriotism could not evolve, because they were not associated for a long time with any particular country.

By the time of the Atharvaveda Saṁhitā the Aryans were fully settled in India. The Madhyadeśa or Middle-land (the heart of India) was already occupied. Centuries of their history were associated with the country. They could recall their tradition and achievements. They were fully conscious that their life and maintenance were derived from the country they were living in. Under the circumstances, it was but natural for the Indo-Aryans to conceive a motherland. This conception is embeded in one of the Atharvavedic hymns called 'Prithivī-sūkta' (Hymn to the Earth). This hymn has been subjected to literary, religions and mythological speculations by early writers. The endeavour in the following pages will be to bringout more practical and mundane aspects of the Earth which bear more closely on the relation of man to her. It should be noted, however, that the motherland has been invoked here as a goddess and her conception is highly tinctured with religious emotion and fervour. We can form an idea of her from the attributes and statements regarding her in the hymn. They can be classified under various aspects—(1) Sentimental (2) Physical and Territorial, (3) Population, Traditional and Organizational and (4) Moral. But these aspects should not be confused with the political conception of the state under (1) Territory (2) Population and (3) Organization. The Indo-Aryans were still in a transitional stage between tribal and territorial. These can be at the best regarded as the intuitive for shadowing of a political and moral stage.

1. *Sentimental Basis*

The Atharvavedic seer has addressed the earth as mother with all the affections and fondness of a child: "....May Earth pour out her milk—mother Earth to me her son.[2] The Earth is my mother, I am the son of the Earth; Parjanya is our father, may he further us."[3] Stability, prosperity and fortune are sought from the mother with the firm hope that she would not fail her children: "Mother Earth, do thou fix

2. सा नो भूमिर्विसृजतां माता पुत्राय मे पयः। *Atharvavede*, XII, I. 10.

3. माता भूमिः पुत्रोऽहं पृथिव्याः etc. *ibid.*, XII. I. 12.

and establish me, thou that art the associate of heavens, grant me prosperity and fortune."[4] It may be observed that here the reference is not to the primary or the creative aspect of the mother but to her nurturing activities. For all that the motherland gives the author of the hymn bows down before her in reverential attitude: "To the Earth whose breast is of gold, let me offer salutation.[5] To the Earth on which is nurturing food, rice and barley, on which are the five peopling races, to the Earth whose lord is Parjanya, be honour, to the Earth on which the rain drops fatness."[6] The composer of the hymn invites the assemblage of people to sing together the glories of the motherland: "In the peopled places, in the waste and woodland, in the congregation of men upon the earth, in the assembly and in the gathering together, let us speak sweetly regarding thee."[7] Here all the germs of patriotic sentiments are present, which are responsible for converting the land of birth into an idol, and under their spell even those people, who have ceased to worship images of gods, have deified their countries and adore her symbols.

2. *Physical and Territorial Basis*

From the world of emotion and sentiments the author of the hymn comes to a more material conception of the motherland as the wide earth with rivers and mountains, full of flora and fauna and as the producer of all the necessities of life. First of all the motherland is conceived as a spacious land for the residence of the living beings. 'Great is the place of thee, thou has become great.'[8] There is a prayer that the earth may provide wide space for the people: "May the Earth, the mistress of the past and future, give us wide room."[9] The passage points not to a small tract of land but to an extensive country containing enormous space for people to live in. The first material value of the motherland is residential, in that she embraces all her children in the lap. This conception of

4 *ibid.* XII. I. 13.

5 तस्यै हिरण्यवक्षसे पृथिव्या अकरं नमः । *ibid.*, XII. I. 26.

6 यस्यान्नं व्रीहियवौ यस्या इमाः पञ्चकृष्टयः ।
भूम्यै पर्जन्यपत्न्यै नमोस्तु वर्षमेदसे ॥ *ibid.*, XII. I. 42.

7 ये ग्रामा यदरण्यं या सभा अधिभूम्याम् ।
य संग्रामा समितयस्तेषु चारु वदेम ते ॥ *ibid.*, XII. I. 56.

8 महत्सधस्थं महती बभूविथ । *ibid.*, XII. I. 18.

9 सा नो भूतस्य भव्यस्य पत्न्युरुलोकं पृथिवी नः कृणोतु । *ibid.*, XII. I 1.

t

the motherland as a wide land fits in with the Aryan occupation of the Madhyadeśa (Middle-land).

The motherland is not only a monotonous blank space but she is full of physical varieties—forests, mountains, rivers and seas. "May the Earth which hath ascent and descent and much plain country.[10] May the Earth on which is the sea, likewise the great rivers and the waters.[11] May the hills and snowclad mountains, may the waste and woodland, O Earth, be pleasant; unwearied, unhurt, unscathed may I dwell on the earth which is tawny, dark, ruddy, of diverse colours, firmly established, protected by Indra."[12] On analysis the physical features of the motherland can be stated under the following heads:—(1) Highland, (2) Law land, (3) Plain country, (4) Hills, (5) Snowy mountains, (6) Forests, (7) Soils of various colours, (8) Rivers and (9) Seas.

The Atharvavedic motherland is not a country of perpetual cold nor a zone of constant heat. Rather, she is a land of temperate climate with seasons varying throughout the year. All the six Ṛtus (seasons) of India are mentioned in the hymn. "May thy summer, O Earth, thy rains, thy autumns, thy early and late winter, thy spring—may thy appointed seasons, thy years and thy day and night, O Earth, yield us blessings as it were milk."[13] This rotation of six seasons is, again, peculiar to northern India, the plains of Hindustan, with extreme winter and extreme summer. Before the Aryans occupied this land they were not familiar with all the six seasons. In the cold countries out side India and in the extreme North West of India they knew only Hemanta (extreme winter); when they expanded to the Punjab, they became familiar with autumn and summer, and they knew Varṣā when they came to the Madhyadeśa.

With different seasons in the year the motherland is the producer of the varieties of vegetables, herbs and corns: "where the timber trees and plants stand fast and so do the herbs for evermore, even to the Earth, which nurishes all things

[10] यस्या उद्वतः प्रवतः समं बहु । *ibid.*, XII. I. 2.

[11] यस्यां समुद्र उत सिन्धुरापो etc. *ibid.*, XII. I. 3.

[12] गिरयस्ते पर्वता हिमवन्तोऽरण्यं ते पृथिवि स्योनमस्तु ।
बभ्रुं कृष्णां रोहिणीं विश्वरूपां ध्रुवां भूमिं पृथिवीमिन्द्रगुप्ताम् ॥
ibid., XII. I. 11.

[13] ग्रीष्मस्ते भूमे वर्षाणि शरद् हेमन्तः शिशिरो वसन्तः ।
ऋतवस्ते विहिता हायनी रहो रात्रे पृथिवि नो दुहाताम् ॥ *ibid.*, XII. I. 36.

and is surely founded, let us render praise."[14] Rice and barley the favourite corus of the Indo-Aryans were also bestowed upon them by the motherland. "To the Earth, on which is nurturing food, rice and barley."[15] From the Yajurveda[16] we know that a large number of cereals were cultivated by the Aryans, but they were still fond of rice and barley. According to the above descriptions the vegetable resources of the motherland consisted of the following :—(1) Timber trees, (2) Plants and (3) Cereals. Apparently these do not exhaust her vegetable kingdom, but they attracted the attention of the author of the hymn particularly.

The motherland of the Atharvavedic Aryans contains in her womb precious metals and minerals. "The Earth is formed of rock, and flint and dust ; the Earth is firmly wrought together and established ; to the Earth whose breast is of gold let me do honour."[17] The mineral riches mentioned above consist of (1) Rocks, (2) Flints, (3) Dust—Alluvial Soil and (4) Gold Deposit. Further reference is made to the wealth and treasures hidden under the earth. "May the Earth that holdeth everywhere treasure in hidden places, give me wealth—jewels and gold ; may the bounteous Earth, the kindly goddess, give me much wealth."[18]

Richness in animals and birds is another feature of the motherland. '....May the Earth, the home of cattle, of horses, of birds, grant us enjoyment and honour. May the Earth which beareth everywhere breathing and living things, place us in possession of cattle which shall not dry."[19] Though the list of animals and cattle given here is not exhaustive, the most useful of them are specifically mentioned. Cattle supplied most nurishing food, milk, and horses helped the Aryans in their wars and races. Other animals are covered by generic terms like breathing and living things.

14 यस्यां वृक्षा वानस्पत्या ध्रुवास्तिष्ठन्ति विश्वहा ।
पृथिवीं विश्वधायसं धृतामच्छावदामसि ॥ *ibid.*, XII. I. 27.

15 यस्यांमन्नं व्रीहियवौ etc. *ibid.*, XII. I. 42.

16 *Vajasaneye Sanimita*, XIII. 12.

17 शिला भूमिरश्मा पांशुः सा भूमिः संधृता धृता । *Athawaubeda,*
तस्यै हिरण्यवक्षसे पृथिव्या अकरं नमः ॥ *ilid.* XII. 1. 26

18 निधिं बिभ्रती बहुधा गुहा वसु मणिं हिरण्यं पृथिवी ददातु मे ।
वसूनि नो वसुदा रासमाना देवी दधातु नो सुमनस्यमाना ॥ *ibid.*, XII. 1. 44

19 गवामश्वानां वयसश्च विष्ठा भगं वर्चः पृथिवी नो दधातु । *ibid.*, XII, 1. 5
या बिभर्ति बहुधा प्राणदेजत् etc. *ibid.*, XII. I.

The element of Fire pervades the motherland and bestows on mankind warmth, life and lustre. "Agni is in the Earth, in herbs; the waters contain Agni; Agni is in the flint-rock; Agni is in men; in cattle and in horses are many Agnis...... May the Earth, whose garment are of flame, whose knees are dark, make me vigorous and active."[20] The experience of the all-pervasive nature of Fire must have been the result of the long association of the Indo-Aryans with the Firecult. But of what use was Fire hidden in different places to the Aryans is not clear. It is, however, regarded as a potential power of the motherland and is taken to be closely connected with life and energy.

According to the laterday Hindu Philosophy the special property of the Earth is smell. The Atharvavedic speculation is quite familiar with this property of the motherland. She is addressed as possessing this property in particular. "With the odour which is produced of thee, O Earth, which herbs, which the waters contain, which the Gandharvas and Apsarases delight in,—with that do thou make-me fragrant; may no one hate us. With the odour of thee which has penetrated the firmament,—the odour which of old the immortals gathered and brought to the marriage feast of Suryā,—with that do thou make me fragrant; may no one hate us. With the odour of thee which exists in humanity—loveliness and beauty in men and women—in the horse and the elephant—which is the glory of the maiden—fill us, too, with that; may no one hate us."[21] This conception of the motherland relieves the mind from the visualisation of the matter of fact natural resources of the earth and brings out more festive and aesthetic aspects of her. We are told that Gandharva and Apsarases delight in odour. Here, for the first time in the Indian literature, we find an evidence which indicates the permanent relationship of scent with music and beauty which are represented by Gandharvas and Apsarases. The attractive sensation created by odour is also referred to in the hymn: "....With that do thou make us fragrant (so that) no one hate us." That on the occasion of marriage and other social and festive events scent was re-

20 अग्निर्भूम्यामोषधीष्वग्निमापो विभ्रत्यग्निरश्मसु ।
अग्निरन्तः पुरुषेषु गोस्वश्वेष्वग्नयः ॥ *ibid.*, XII. I, 19
अग्निवासाः पृथिव्यसितज्ञूस्त्विषिमन्तं संशितं मा कृणोतु । *ibid.*, XII. I. 21

21 यस्ते गन्धः पृथिवि संबभूवयं विभ्रत्योषधयो यमापः ।
यं गन्धर्वा अप्सरसश्च भेजिरे तेन मा सुरभिं कृणु मानो द्विक्षत कश्चन ॥
यस्ते गन्धः पुष्करमाविवेश यं संजभ्रुः सूर्याया विवाहे ।
अमर्त्याः पृथिवी गन्धमग्रे तेन मा०" etc. *ibid.*, XII. I. 23—25.

quisitioned for making persons more attractive and for entertaining the guests is quite evident from the above passage.

With all the resources at her command the motherland supports and sustains the whole world. "May the Earth, the place of habitation, which containeth all things, which holdeth all treasure, which suffereth every creature that hath life to repose on her golden breast.[22] On the Earth present to the gods the sacrifice, the prepared oblation. On the Earth mortal men are satisfied with food; may the Earth give me breath and life, may the Earth make me to be full of years."[23] She is not partial to the good alone but she also shows her generosity equally to the cruel and the wicked. "The Earth which endureth the burden of the oppressor and beareth up the abode of the lofty and the lowly, suffereth the hog and giveth entrance to the wild bear."[24] Here all-embracing nature of the mother is emphasised. The analogy is human. There might be wicked children, but the mother is always the image of kindness and love.

The habitation afforded by the motherland is, for the human beings, free from all dangers natural and supernatural. "Keep away from us, O Earth, thy cattle of the wild, thy beasts of the forest, thy lion and tiger, which go about to devour men,—keep far from us the jackal and the wolf, the evil being and the wicked spirit, and the Rakṣas. Defend us, O Earth, from the Gandharva and the Apsaras, the Arāya and the Kimdin, the Piśāca and all the family of the Rākṣas."[25] The motherland is also free from deadly reptiles and insects. "Thy serpents, thy scorpions of deadly bite, thy wasps which are driven in by the cold and lie in hidden places,—all thy insects, O Earth, which are quickened into life in the rainy season,—may these crawling things not creep upon us; favour us with the things that are innocent."[26] Different kinds of the enemies of human

22 विश्वम्भरा वसुधानी प्रतिष्ठा हिरण्यवक्षा जगतो निवेशनी । etc. *ibid.*, XII. I. 6

23 *ibid.*, XII. I. 54

24 मल्वं बिभ्रती गुरुभृद् भद्रपापस्य निधनं तितिक्षुः ।
वराहेण पृथिवी संविदाना सूकराय विजीहते मृगाय ॥ *ibid.*, XII. I. 54

25 ये ते आरण्या पशवो मृगा वने हिताः सिंहा व्याघ्राः पुरुषादश्चरन्ति ।
उलं वृकं पृथिवि दुच्छुनामित ऋक्षीकां रक्षो अप बाधयास्मत् ॥
ये गन्धर्वा अप्सरसो ये चरायाः किमिदिनः ।
पिशाचान्सर्वान् रक्षांसि तानस्मद् भूमे यावय ॥ *ibid.*, XII. I. 49, 50

26 यस्ते सर्पो वृश्चिकस्तृष्टदश्मा हेमन्तजब्धो भृमलो गुहाशये ।
क्रिमिर्जिन्वत्पृथिवि यद्यदेजति प्रावृषि तन्नः सर्पन्मोप
सृपद्यच्छिवं तेन नो मृड ॥ *ibid.*, XII. I. 46

beings are enumerated in the above verses :—(1) Insects, (2) Wasps and Flies, (3) Reptiles, (4) Wild animals, (5) Robbers and thieves, (6) Gandharvas and Apsarases, (7) Piśāca and Rākṣas and (8) wicked Spirits. Some of these are real and some imaginary. For early settlers these dangers were more potent and deadly than they are now. Protection from these enemies is essential for any human settlement.

3. *Population, Tradition and Organization*

The next essential feature of the motherland is population or people in their diverse fields of activities. She is so often addressed as the land inhabited by five peopling races—the five most important Vedic tribes including their branches and subgroups. On account of their activities, the motherland is primarily a Karmabhūmi or 'the field of action': "Thou art the capacious field for sowing the seed of action by the people, bestowing all desire, inexhaustible and spreading out."[27] Here the people are simply to work out the natural resources of the mother and they will realise all their desires. Their actions properly performed will bring sure fruits which the heroic people worthy of their mother can legitimately enjoy: "The Earth, which, by means of the offering, Viśvakarman drew forth out of her hiding place in the mist, even the vessel which was to yield pleasure, as yet concealed in secret, was made manifest for the enjoyment of the sons of the noble mother."[28] The motherland is the arena of performing sacrifices and good actions. "On the Earth do ministrant men enclose the consecrated ground, there do they lay out the sacrifice; there are the sacrificial pillars erected—the upright shining pillars before the offering; may the glad Earth yield us fruits of gladness."[29]

The motherland is the mother of not only those people who belong to one race and religion and speak one language. She is the mother of all those who take shelter in her bosom and have her interest to their hearts. "Let the Earth, bearing in many places people of different speech and diverse customs or religions according to their homes."[30] Such a conception of the motherland was quite natural for the Indo-Aryans living in Middle India where they met people different from them in

27 त्वमस्यावपनी जनानाम् अदितिः कामदुघा प्रपथाना । *ibid.*, XII. I. 61

28 *ibid.*, XII. I. 60

29 *ibid.*, XII. I. 18

30 जनं बिभ्रती बहुधा विवाचसं नानाधर्माणं पृथिवी यथौकसम् । *ibid.*, XII. I. 45

race, religion and language . Initial antagonism must have been conquered by the cementing forces of time and the conquerors became more accommodating in their attitude. The force which was most operative in this process was not that of the kings and the soldiers but of the seers and the poet who had the humanizing influence over the people.

The people were conscious that the motherland was the country where their most sacred religious rites and intellectual activities took place and they were proud that from time immemorial their forefathers had been doing the heroic deeds there."May the Earth, on which are placed the tabernacle and ask, in which the pillar of sacrifice is set, on which the Brahmaṇas who·know the offices give praise with hymns and intonations, on which the ministers set themselves to their duties that Indra may drink the Soma—May the Earth, on which the seven ancient Ṛṣis (seers) who fashioned creation, being instant in service, extricated the kine, by a solemn feast, by sacrifice with dedication to holiness."[31] The tradition and victorious history of old are referred to with a sense of dignity."On whom the people of old formerly spread themselves, on whom the gods overcame the Asuras...."[32] The children of the soil also recall the wars and battles of ancient times and they aspire and hope for success against their adversaries. "May the Earth, on which mortal men sing and dance with a loud noise, on which they war, on which the battle-cry and the drum shout aloud,—may the Earth do away with adversaries, may the Earth rid us of all our enemies."[33]

It is this long historical association with the motherland which creates permanent interest in her. The Atharvavedic seer expresses his sincere solicitude for the motherland in the following words :—"That which I dig up, O Earth, may it quickly grow again ; may I not pierce through a joint or through the heart of thee, thou that continually renewest thy face."[34] No foreign exploiter can entertain such tender feelings for a country, whose only interest is to reap the richest harvest within the shortest possible time without paying any heed to the exhaustion of the resources of that country.

Other essential feature of the motherland is her compact life organized for protection, peace and prosperity. Heavenly

[31] *ibid.*, XII. I. 38—31

[32] *ibid.*, XII. I. 5

[33] *ibid.*, XII. I. 41

[34] *ibid.*, XI. I. 35

gods are invoked to guard her against enemies. "May the Earth, which the gods, that never slumber, guard without ceasing, yield us sweet and pleasing things as it were milk."[35] In a number of verses Indra, the warrior god of the Indo-Aryans, is requested to grant protection and to destroy the enemies of the country. But it is not only the heavenly ones that protect the earth. She herself is also ready to meet the dangers. "Him who hateth us, O Earth, who plagneth us, who provaketh us by thought—him O Earth, do thou prevent and give him over into our hands."[36] The children of the mother, through her grace, do not lag behind in the protection of peace in the country. "May I be full of force, pressing forward; may I scatter all those that are violent."[37] When violence and crimes are stopped all creatures enjoy peaceful existence. "Mortals that art born of thee go upon thee, thou bearest two-footed things and four-footed; thine are those five races of men, upon whom the Sun at his rising doth shed immortal glory with his rays."[38]

In such a secure country people congregate and lead an organized life with the discipline of speech and action. "In the peopled places, in the waste and woodland, in the congregation of men upon the earth, in the assembly and the councils, may our words be acceptable."[39] In this passage there are references to the following unit of social and political organization :—(1) Grāma or village, the smallest unit of organized life, (2) Sabhā or the assembly of the people where the general problems of social and political importance were discussed and (3) Samiti or the council of the king where the deliberations regarding the state affairs were conducted. It is interesting to note that the unity of action is associated with the restraint of speech the laxity in which might result in discordance and disturb the balance of the social and political life.

4. *Moral Basis*

To crown all other attributes of the motherland moral virtues are brought out most prominently which are regarded as the basic principles that sustain the earth. Without moral

[35] *ibid.*, XI1. I. 7.

[36] *ibid.*, XII. I. 14.

[37] त्विषीमानस्मि जूतिमानवान्यान्हन्मि दोधतः ॥ *ibid.*. XII. I. 58.

[38] *ibid.* XII. I. 15.

[39] *vide.* foot note No. 7.

foundation no amount of patriotic sentiments, physical resourcefulness and communal organization can make the motherland great and command the reverential devotion from her children. In the very beginning of the hymn the author very clearly and emphatically declares, "Truth which is mighty, righteousness which is strong, consecration and dedication to holiness, prayer and sacrifice, sustain the earth...."[40] The first moral virtue which supports the motherland is mighty truth (Bṛhat Satyani). Really speaking it is the bedrock of all other virtues, the essence of existence and the only enduring thing in the world. The second moral virtue is strong righteousness (Ugraṁ Ṛtaṁ)—the Great Order—cosmic, moral and ritual. The third is consecration (Dīkṣā), the firm and pious determination to perform the prescribed duties. Anothe raustere virtue is (Tapa), dedication to a cause, undeterred by obstacles in the way. Sincere prayer (Brahma) which establishes a direct communion between the individual and the universal soul is also a great virtue on the part of the children of the motherland. The last virtue mentioned in the verse is sacrifice (Yajña) which is not essentially material offering to the gods but the spirit of self-abnegation in the fulfilment of the great cosmic purpose. This ethical note and a religious and mystic touch in the national life of the Indo-Aryans have been an abiding feature of their political history.

Comparing the Atharvavedic conception of the Earth with the Greek conception of her, Charles Bruce refers to this aspect of Indian speculation and thinks that the Indians had a higher moral footing than the Greeks. "But the Atharva hymn contains, the expression of a religious idea, which proves the Earth to have been viewed by the Early Indian religionists from a hearing where the Greeks appear to have found no standpoint. In the concise but the forceful expression of the opening line of the hymns we find the three components parts of religion laid down as the basis of the world; truth and justice as the rule and conduct of life in its relation to others, religious consecration, temperance and obstinence as the rule of self-guidance and the means of inward purity; and prayer and sacrifice as the outward manifestation of devotion and obedience to gods. Hence it is obvious that, in their conception of the world, they embraced more than the idea of a natural material power, and strove after the recognition of an unknown power—a supreme spirit of order, which had created and ordered all things in just proportion, whose equilibrium was maintained by the absence

40 सत्यं बृहदृतमुग्रं दीक्षा तपो ब्रह्म यज्ञं पृथिवीं धारयन्ति । *ibid.*, XII. I. 1.

of all excess, and whose prerogative it was, as the disposer of all things, to be entreated for his favour."[41]

In the Atharvavedic conception of the motherland the lower basis of speculation is a geographical unit—a stretch of land with a variety of physical features. Then it widens into rich material resources which the motherland is capable of producing, and the people who inhabit her with their social and political organizations for self-preservation and progress. The Atharvavedic seer further soars aloft in the higher values of life—truth, order, sacrifice, prayer etc.—which are ultimately responsible for the existence and prosperity of the motherland.

[41] *Journal of the Royal Asiatic Society of Great Britain & Ireland;* Vol. XIX. p. 385.

THE DIELECTRIC CONSTANT OF IONIZED AIR

S. S. Banerjee, D.Sc.

INTRODUCTION

During the last few years a large number of experimental investigations have been carried out to verify the Eccles-Larmor[1,2] theory propounded in connection with the propagation of radio waves through the ionized upper atmosphere. A brief sketch of this theory has already been published in this Journal.[3]

The earliest experiment in connection with the above investigation was made in 1913, immediately after the publication of Eccles' paper. Investigations are still proceeding and the experimental arrangement adopted by the various investigators to detect the dielectric constant of the ionized gas is more or less as described below. The gas to be experimented upon is contained in a glass tube and is ionized by electric discharge. In some cases attempt has been made to experiment with pure electronic atmosphere by using very high vacuum and drawing out electrons from a hot filament by the application of an accelerating voltage. A pair of condenser plates are placed either immediately outside or inside the discharge tube. These are connected to an inductance or to Lecher wires forming a resonating circuit. The system is energised by a radio oscillator of variable frequency and its resonance frequency is measured once when the gas in the tube is in normal state and again when it is ionized by electric discharge.

A glance through the literature containing the results of various investigators, since the earliest experiments in 1913 to the present day, will show that the observed results are often conflicting with the Eccles-Larmor theory. The value of the dielectric constant found is sometimes greater, sometimes equal to and sometimes less than unity. It should be mentioned however that in the theory there is no room for recording a value of dielectric constant greater than unity.

Various explanations have been put forward to interpret the anomalous nature of the results obtained.

These may be classified thus :—

(i) It is imagined that the ionized gas inside the discharge tube possesses quasi-elastically bound electrons. These have a natural frequency of their own and thus make the medium behave like an

ordinary optically dispersive medium with absorption band. Dielectric constant greater or less than unity is thus obtained according as the exciting frequency is less or greater than the natural frequency. This view advocated by C. Gutton,[4,5] H. Gutton[6] and their co-workers has recently been developed by Jonescu and Mihul.[7] It is suggested that the electrons in ionized air are, attached to oxygen molecules and that the frequency of precession of the former round the magnetic field of the latter is the natural frequency of the ionized gas. H. Gutton is of the opinion that such forces produce "plasmoidal oscillations" of Tonks and Langmuir.

(ii) It has been suggested by Appleton[8] and his collaborators that when the experimental condenser plates are placed inside the discharge tube the anomalous increase of the dielectric constant of the ionized gas may be due to the formation of ionic sheaths on the condenser plates. These sheaths reduce the effective distance between the plates and thereby increase the capacity of the condenser. A fictitious increase in the dielectric constant is thus recorded.

(iii) Pedersen[9] and Rybner[10] advocate that the conductivity acquired by the gas in the discharge tube by ionization alters the resonance frequency of the measuring system and thereby indicates a fictitious increase in the capacity of the condenser.

In the usual experimental arrangement the conductivity may also produce a quasi-resonance effect. That conductivity may be one of the factors for giving anomalous results is also recognised by Appleton.

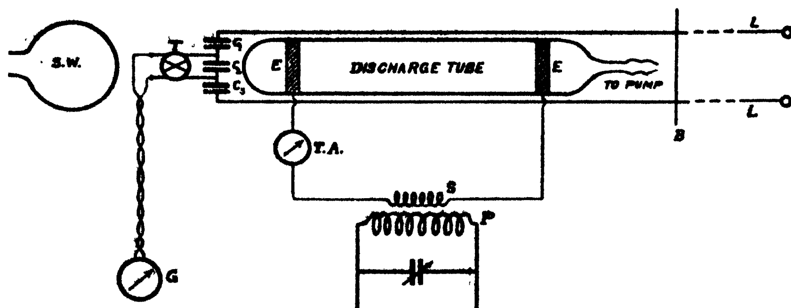
We will now discuss below the three above-mentioned interpretations. Regarding the Gutton effect, it may be mentioned that the question has been recently thoroughly investigated by Appleton. He concludes that the resonance effect observed by Gutton is a distinct phenomenon and is not connected with the observed anomalous increase of the dielectric constant to values greater than unity. Appleton and Chapman reported that there was no quasi-elastic force and the explanation of quasi-resonance was given as due to the negative value of the dielectric constant as suggested by Pedersen and Rybner. Appleton has verified certain experimental observa-

tions of Tonks[11] with low values of discharge tube current and noted the presence of a second resonance point. He is of opinion that the "plasma resonance" of Tonks and Langmuir should be regarded as "sheath resonance" at the boundary of the plasma and has shown that the frequency of this is very high. Ziegler[12] has pointed out that there is no evidence of such effect at very high frequencies between 3×10^8 cycles/sec to 3×10^9 cycles/sec.

Appleton's sheath might be a contributory cause to the observed anomaly. But that it is not the principal cause will be seen from the experiments conducted by us and described later in which, even with the conductors constituting the capacity (Lecher wires) running inside the discharge tube, it has been possible to record dielectric constant less than unity. To avoid the effect of conductivity Appleton advocates the measurement of voltage resonance instead of current resonance of the oscillatory circuit. It has been shown however, in an earlier investigation by the author[13] that this precaution is effective only when the medium between the plates of the experimental condenser is uniformly conducting throughout its entire volume. If the conductivity is non-uniformly distributed, as is the case when the space between the condenser plates consists partly of non-ionized air, partly of glass and partly of ionized air, the "voltage resonance" measurement is not effective in eliminating the conductivity effect.

EXPERIMENTAL ARRANGEMENTS.

The experimental arrangement for measuring the dielectric constant of the ionized air is the modification of the apparatus employed by Banerjee and Joshi[14] in this Laboratory, for the measurement of dielectric constant and conductivity of soil. The space between the Lecher wires is filled with ionized air, by placing the discharge tube centrally along the length of the wires, as shown in the following figure (*Figure 1*).



(*Figure 1*)

Instead of simply noting the resonance points, resonance curves, as explained later, are drawn. These curves serve a two-fold purpose. In the first place they allow one to determine the points of resonance accurately, from which the wavelengths and the dielectric constants are calculated; and in the second place they afford means of determining the attenuation constant of the Lecher lines (immersed as it were in the ionized air in the discharge tube) for the calculation of the conductivity acquired by the air due to ionization.

It may be mentioned here that unlike the experimental arrangements employed hitherto the present arrangement allows one to make quantitative measurements both of the dielectric constant and of the effect of conductivity.

The system of the Lecher wires (LL), fig. 1, 8 metres long and having a separation of 3 cm., is run straight and sufficiently clear off from the walls and floor. It is energised by valve oscillators (SW) of frequency range 33 Mc./sec. to 375 Mc./sec. For frequencies higher than 200 Mc./sec. Barkhausen-Kurz oscillators are employed.

The discharge tube 3 cm. diameter is made of pyrex glass. The evacuating system consists of a Cenco Hyvac pump and is connected to the discharge tube through a McLeod gauge. The pressure within the tube could be varied at will and reduced to 0.001 mm. of mercury.

The air within the tube is ionized by passing high frequency electric discharge. The electrodes (EE) in the form of rings of copper foil, 1.5 cm. wide are fitted externally to the tube. The exciting voltage is obtained from the terminals of a secondary coil (S) coupled to the oscillator coil (P) of a valve oscillator generating about 600 Kc./sec. The discharge current, which is kept constant during a set of observations, is measured with a thermo-milliammeter (TA) in series with the secondary coil. The voltage developed across the two external electrodes could be measured with an electrostatic voltmeter.

Referring to fig. 1, it will be observed that the input end, instead of being short-circuited by a loop of wire, as is usually the case, is bridged by three condensers of large values in series. This has the effect of increasing the symmetry of the resonance curves. Across the middle condenser are connected one pair of terminals of a vacuum junction thermocouple (T); the other pair are connected to a low resistance reflecting galvanometer (G). The galvanometer deflections are observed as the short

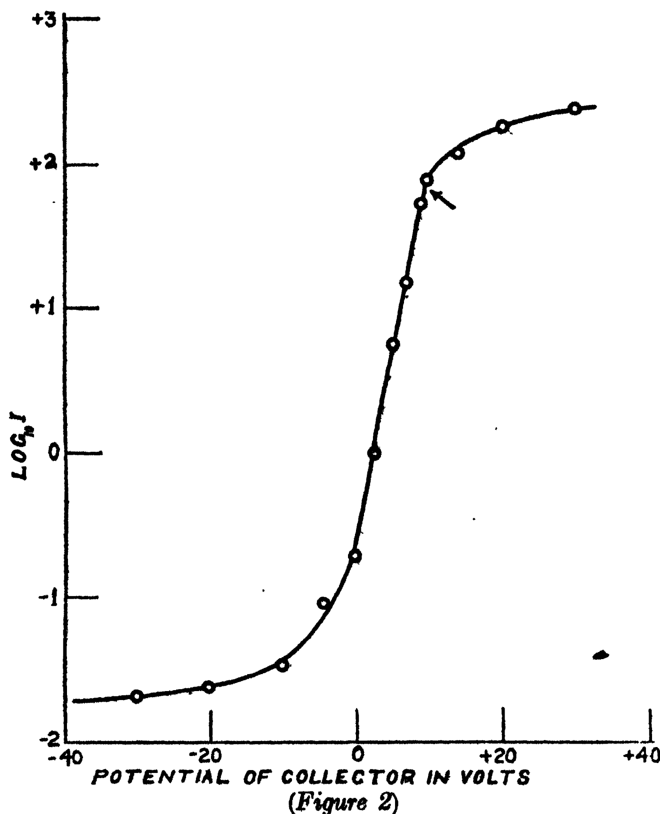
circuiting metal bridge (B) is moved on either side of the position of resonance. The exact point of resonance is afterwards obtained from the resonance curve plotted between the positions of the wire on the bridge and the galvanometer deflections.

A series of observations for calculation of dielectric constant is thus taken : The pump is allowed to run for sufficient time to bring the pressure inside the discharge tube to a convenient value which can be kept constant. The valve oscillator for energising the Lecher system is now switched on and the position of resonance is roughly determined by moving the short-circuiting bridge and watching the galvanometer deflection. Readings for plotting the resonance curve are now taken by noting the galvanometer deflections for positions of the bridge close to and on either side of the resonance point. The discharge is now allowed to pass, care being taken that the whole length of the tube between the electrodes is filled with uniform glow. Readings are again taken as previously of the galvanometer deflection in relation to positions of the bridge on either side of the resonance point.

To check the measured values of the dielectric constant, these were compared with those calculated from the electron density and collisional frequency of the electrons inside the discharge tube determined experimentally. The well-known "exploring collector" method of Langmuir and Mott-Smith,[15] modified after Banerji and Ganguli[16] to suit the case of high-frequency discharge, was employed for the purpose. A brief description of the experimental procedure is given below.

As mentioned before, the air in the tube was excited by high frequency discharge with external electrodes. In the absence of internal electrodes, to which the space potential of the discharge is usually referred, the circuit for measuring the "collector" current was completed through a phantom electrode in the form of a hollow iron bobbin, 2.8 cm. diameter and 2 cm. length, inserted inside the discharge tube. The bobbin was connected to a metal wire which came out through a seal at one end of the discharge tube and was connected to the earth. The bobbin electrode was kept beyond the main discharge. The collecting electrode was of fine tungsten wire (diameter 0.25 mm.) and was sealed inside a capillary cover from which it projected about 5 mm. The capillary was sealed to the discharge tube so that the tungsten collector projected radially and terminated at the centre of the section of the tube. The discharge tube itself and its discharge conditions were adjusted to conditions similar to those of the previous experiments.

The variation of the "collector" current when the collector potential was changed was measured by a Cambridge unipivot galvanometer. A plot of log I and V for a typical set of observations is given in *Figure 2*, below (I is the collector current in amperes per sq. cm. and V collector potential in volts).



(*Figure 2*)

From the slope of the straight portion of the curve the temperature of the electrons is obtained from the relation

$$\frac{d(\log \mathrm{I})}{dv} = -\frac{e}{k\mathrm{T}}$$

where k is Boltzmann's constant, T temperature and e electronic charge.

When the collector potential attains space potential the relation between log I and V ceases to be linear and the curve shows a sudden bend (marked with arrow in fig. 2). The collector current i per unit area at this potential is given by the equation,

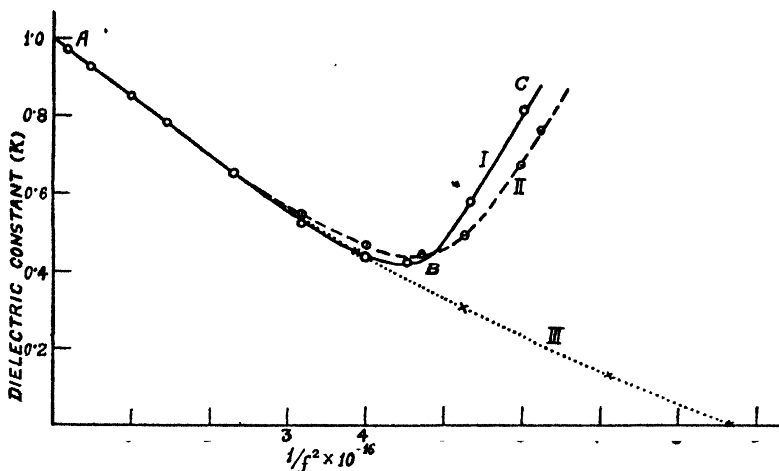
$$i = \mathrm{N}e\sqrt{\frac{k\mathrm{T}}{2\pi m}}$$

where N is the number of electrons per c.c. and m the mass

of the electron. Thus if T is obtained from the slope of the (log I-V) curve and i by measurement of the collector current near the bend of the same curve, N may be determined from the above relation.

OBSERVATIONS AND RESULTS

Variation of the dielectric constant (K) with frequency is shown in *Figure 3* below. Curve I shows the variation of K observed experimentally. Curve II shows the theoretical variation calculated from Eccles-Larmor formula. Curve III has been plotted from the apparent values of K calculated from line constants of Lecher wires.



(*Figure 3*)

The dielectric constant K of an ionized gas is given by

$$K=1-\frac{4\pi Ne^2}{m(p^2+\gamma^2)} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(i)}$$

where N is the number of electrons per c.c., e, m the charge and mass of the electron respectively ; γ the collisional frequency of the electrons in the medium and p the angular frequency of the waves.

K is unity for infinitely large values of p^2 and is zero when $p^2=\frac{4\pi Ne^2}{m}-\gamma^2$. (If γ^2 is greater than $\frac{4\pi Ne^2}{m}$, K will not attain zero value for any value of p^2). The value of K can never be greater than unity. The nature of the relation between K and $1/f^2$ is shown in fig. 3 (Curve III).

Inspection of fig. 3 shows however, that the observed $1/f^2-$K curve (I) does not follow the theoretical curve III

throughout its entire length. From A to B the theoretical curve III coincides more or less with the experimental curve I. From B, however, the experimental curve branches upwards and tends to a value which might be greater than unity.

An explanation of this anomaly is to be found in the method of measuring the wavelength of propagation in the experimental disposition adopted. When the wave is propagated freely in the ionosphere without being guided by Lecher wires its length is given by

$$\lambda = \frac{\lambda o}{\sqrt{K}} \quad \text{.........................} (2)$$

where λ and λo are measured and impressed wavelengths respectively.

Since K is less than unity, the wavelength in the ionized air, if it could be measured, would be found to be greater than that in free space.

When however, the waves are guided by Lecher wires the wavelength of propagation instead of being given by equation (1) is given by

$$\lambda = \frac{2\pi}{\beta} \quad \text{.........................} (3)$$

where β is the wavelength constant and is equal to

$$p\sqrt{LC}(1 + G^2/8p^2C^2 + \ldots.)$$

where, G is the leakance, L the inductance and C the capacitance per unit length of the parallel wires.

If $G^2/8p^2C^2 + \ldots.$is negligible compared with unity, β is simply equal to $p\sqrt{LC}$. This is the case when $p^2 \gg \nu^2$, that is, when the effect of collision is negligible. In this case the ionized air between the Lecher wires does not show appreciable effect of conductivity but causes an effective reduction of the dielectric constant according to equation (1). The velocity of propagation of waves along Lecher wires is not different from the velocity of free propagation. K, as calculated from $(\lambda o/\lambda)^2$ corresponds to that calculated from equation (1). The variation of K with p^2 or with $1/f^2$ follows equation (1) and the approximate straight portion of the curve from A to B is obtained.

When $G^2/8p^2C^2 + \ldots.$cannot be neglected as compared with unity, the wavelength of propagation as measured for the case of guidance of Lecher wires no longer corresponds to the wavelength for free propagation in the ionized air. This is

the case when the value of p^2 approaches that of ν^2. In such case the effect of β in equation (3) is to cause a decrease in the value of λ and K as calculated from $(\lambda o/\lambda)^2$ no longer corresponds to that calculated from equation (1). The variation of K with $1/f^2$ now follows the upward branch B to C (curve II, fig. 3).

SUMMARY AND CONCLUSION.

Experiments on measurement of the dielectric constant of ionized air are described in the paper. The experimental method consists in determining at high radio frequencies the line constants of a pair of Lecher wires immersed in ionized air contained in a discharge tube. The results show that when the conductivity of the ionized air is small compared with wave frequency the measured values of the dielectric constant agree with those calculated from the Eccles-Larmor theory. Anomalous results apparently contradicting the Eccles-Larmor theory are obtained when the collisional frequency approaches the value of the frequency of the impressed wave. These are explained on the basis of the theory of wave propagation along parallel wire transmission lines.

It may be concluded that unlike the experimental methods employed by previous investigators, the method described here allows one to make quantitative measurements of the dielectric constant of ionized gases. Similar investigations with different gases in the discharge tube are in progress.

REFERENCES :

1. W. H. Eccles, *Proc. Roy. Soc.*, 87 : 79 (1912)
2. J. Larmor, *Phil. Mag.* 48 : 1025 (1924)
3. S. S. Banerjee, *Journal of B. H. U.* 1 : 145 (1937)
4. C. Gutton, *Annales de Physique*, 14 : 5 (1930)
5. C. Gutton, *U.R.S.I. Report, Commission V*, (1934).
6. H. Gutton, *Annales de Physique*, 13 : 62 (1930)
7. T.V. Jonescu & C. Mihul, *Comptes Rendus*, 192 : 343 (1931)
8. E. V. Appleton & E. C. Childs, *Phil. Mag.*, 10 : 982 (1930)
9. P. O. Pedersen, "*Propagation of Radio waves*" (1927) p. 90
10. J. Rybner, *L'Onde Electrique*, 7 : 428 (1928)
11. L. Tonks, *Phys. Rev.*, 37 : 1458 (1931)
12. W. Ziegler, *Phys. Zeits.*, 35 : 476 (1934)
13. S. S. Banerjee, *Phil. Mag.*, 17 : 835 (1934)
14. S. S. Banerjee & R. D. Joshi, *J.B.H.U.* 1 : 365 (1937)
15. H.M.Mott-Smith & I. Langmuir, *Phys.Rev.*, 28: 727, (1926)
16. D. Banerji & R. Ganguli, *Phil. Mag.*, 11 : 410 (1931)

PLANTS AND EARLY HISTORY OF MAN: ORIGIN OF EGYPTIAN AND PRE-COLUMBIAN AMERICAN CIVILIZATIONS[1]

DR. A. C. JOSHI, D.SC., F.N.I.

BIOLOGY, BOTANY AND HISTORY

Everyone will perhaps wonder at a student of botany talking about the history of man. What has he got to do with it? What can he say about this subject? These are the questions that come naturally to every mind. History is generally associated with the arts. It appears to be far removed from the domain of science, not to speak of mere plant hunting. We all have some idea of a botanist. It is usual to regard him as a person engaged in collecting, naming and listing the species of plants found in a particular locality or habitat. This is not a wrong assumption, because for several centuries this was all the work that a botanist did. Even now some of us spend their whole life on this kind of work, and very often deal only with a small group of plants. There are too many plants in this world to be comprehended by a single person. One person engages himself in the collection and listing of the green or blue-green scums that we so often observe in ponds and ditches. He becomes an algologist. Another studies only fungi or bacteria, which cause many diseases both among plants and animals, and is called a mycologist or bacteriologist. Similarly, there are bryologists, pteridologists, etc. If a person of this kind starts to speak about history, one is quite likely to think that he is going to say some kind of nonsense. This is far from my aim here.

We have all read some history in our schools, some of us perhaps also in the college. Even in the present scientific age, this subject is regarded as more important than natural science. It is taught compulsorily in all schools, while the knowldge of science is not thought to be essential for everyone. Even then most of us are not likely to have learnt much about the early history of man on this planet. The subject is often called by the name of pre-history, meaning 'knowledge of the human past before the dawn of history,' and a teacher of history does

[1] A popular lecture delivered before the Benares Hindu University Scientific Association, December 10, 1941.

not like to waste his time on prehistory. This is inspite of the fact that things most useful to man were discovered by him in prehistoric times, while history is mostly a story of his quarrels and fanaticism. If one has read by any chance something about prehistory or has heard some lectures about it, he is likely to have learnt that it is based mainly on the results of actual excavation of past artefacts and skeletons, comparative philology, geographical distribution of customs, etc. The plants do not appear anywhere in this story.

For this reason, before I proceed further, it would be worth while to explain at least two things. Firstly, how a biologist is interested in the history of man. Secondly, in what way botany can throw any light on this subject.

The science of biology, which deals with all aspects of living organisms, has several branches. One of them is concerned with the study of the external and internal form of the plants and animals. It is called morphology and was the main subject for biological investigation during the last century both for botanists and zoologists. Things have changed somewhat during the 20th century. In the field of botany, morphology now does not attract such a large proportion of investigators as previously. It forms, however, even now a very large part of botanical teaching.

The plant and animal morphology can be studied with different aims. It can be studied for its own sake. This is the method of the present German school of plant morphology led by Troll. On the other hand, since the universal acceptance of the doctrine of organic evolution by biologists, the study of morphology has become intimately connected with the study of the origin, evolution and relationships of different kinds of living objects that inhabit this world to-day or lived in the past. It attempts to trace the past history of every species of plant and animal, and man comes under the latter kingdom. The study of *Homo sapiens*, his form, structure and varied activities in the past and the present, are a part of biology. We now group this knowledge under several different subjects, anthropology, history, sociology, psychology, etc., because man has attached an unusually great importance to his own self and has collected so many facts about his structure and activities that these cannot be grasped easily by a single person.

How plants are related to the early history of man should be clear if we remember the very intimate connection between

animal and plant life. It is the presence of plants, which makes possible the existence of animals, for the latter cannot live without the former. The animals cannot manufacture from carbon dioxide, water and other simple substances found in the inorganic world complex carbohydrates, fats and proteins, on which they depend for their nutrition. Only a green plant possesses this power, and an animal is always directly or indirectly dependent for its existence on vegetable life. The development and wide distribution of the grasses during the Tertiary period made possible the evolution of cow, horse and many other mammals. We are all quite familiar with the great effect which the distribution of certain economic plants has produced on human history during the last five or six hundred years. The production of most of the spices in tropics, particularly in tropical Asia, has been one of the most important factors that induced European colonisation in tropical countries. Many battles between the Portugese, Dutch, French and English were fought to control the spice trade of the East. Columbus sailed westward in search of the spices of the East and discovered the New World. Much of the present struggle and war in the world is caused by the unequal distribution of the vegetable raw materials. If only all plants could be grown wherever desired and the mineral resources of the world were more uniformly distributed, war may be easy to abolish.

If the distribution of economic plants has so significantly influenced the recent history of man, it may be expected to have played an equally important role in shaping his history during prehistoric times. We can safely say that the early man developed a kind of primitive culture, such as skill in hunting and fishing, building of shelters, the use of fire, the art of making some implements from stone, dressing of skin, basketry, perhaps also some rudiments of weaving and clothing, even at the nomadic stage. Higher civilisation associated with government and the numerous arts and crafts, however, could develop only after he had given up his nomadic life and settled in large communities. This could be possible only after the domestication of some wild plants and animals and developemnt of abundant food reserves. Agriculture preceded higher culture. A knowledge about the cultivation of the more important food plants was necessary for the developemnt of higher civilisation. Consequently, from our knowledge of the physiology, origin and distribution of the food plants, which the early man had in common with us, we should be able to say something about the origin of the old civilisations. It is my aim to attempt this here. I shall discuss two or three important

questions related to the early history of man, for which our present knowledge of botany provides very definite evidence.

ORIGIN OF CIVILISATION IN EGYPT.

When we study the literature dealing with the origin of higher culture in man, we find two important schools of thought directly opposed to each other. One of them maintains that all ancient civilisations in the different parts of the world developed independently of one another. The only thing common to them was the common human mind. The brain of man is supposed to have reacted every-where in the same manner to similar external conditions. This explains the points of resemblance between the old civilisations of Egypt, Mesopotamia, Indus valley and others. All civilisations are thus said to be autochthonous.

Opposed to this school are the views of extreme diffusionists, who believe that all culture originated at one place and then spread gradually over the rest of the world by migrations of culture-bearing peoples in all directions. One English author, G. H. Cooper, propounded twenty years ago the thesis that Salisbury Plain in England was the original home of all ancient civilisations. The prospectus of his book states :"Massive and overwhelming proof that the Garden of Eden was in the Salisbury Plain. A master-piece of archaelogical New Thought." The epithet 'master-piece of New Thought' at the present time is significant and we can leave this book with it. The theories of the hypothetical Atlantis and Mu also come here, but the best exposition of the diffusionist view of human culture is given by the Manchester school of history and anthropology associated with the names of Smith and Perry. They have expressed their views in a most impressive manner, so that they are accepted by many people and often find place in text-books. According to this school, Egypt is the cradle of human civilisation, for here alone among many other things agriculture could have possibly developed. Barley is regarded as a native of the Nile valley. Its seeds are supposed by some to have been lying dormant along the banks of the river during summer till the advent of the growing season after floods. They are believed by others to have come down every year floating down the tributaries of the river from Abyssinia. These seeds are supposed, as the water receded after the floods, to have germinated and grown into barley plants. The crop is believed to have matured about the beginning of the hot season. The early man must have been attracted by this self-sown crop of food grains

and settled in the valley. Then he would have observed year after year the sprouting of the barley seeds in the wet mud, the development of the barley plants during winter and the production of ears of grains at the end of winter. Occasionally the crop may be expected to have partially failed. This would have set him thinking and led him to attempt the cultivation of the barley plant himself. Artificial agriculture can be thus believed to have developed from the 'natural' agriculture in the Nile valley, and from this the higher human culture based on agriculture.

We find here a very plausible hypothesis, but difficulties arise immediately we examine it critically with our present knowledge of vegetation and physiology of the barley seed. We have to say at once that things could have never happened this way. In the first place barley plants could possibly grow on the banks of the Nile if there was no other natural evgetation growing there. This is not likely to have been the case. These banks are more likely to have been densely covered with perennial marshy plants. We know from actual records that tall sedges grew here, from which the Egyptians manufactured papyrus, the substitute of paper in ancient Egypt. If the banks of the Nile were covered with perennial vegetation, there would be no place for an annual cereal to grow.

Further, the Nile floods last for about two to four weeks, but the wet mud is there for a much longer period. That barley may grow naturally in such a situation, there should be seeds which can stand immersion in water and mud for several weeks and still retain the capacity to germinate. No cereal possesses such water-proof seeds. The seeds of barley and all other cereals sink very soon when placed in water and lose in every case their viability in less than two weeks.

Another kind of evidence bearing on the same question comes from plant genetics. Our knowledge in this connection has accumulated only within the last twenty years, in fact after the Red Revolution in Russia and the establishment of the Union of Socialistic Soviet Republics. One effect of this revolution is observed in the organisation of scientific research in that country. In contrast with the British Empire, which has depended for its agricultural advancement mostly on one man research stations, Soviet Russia has established research institutes with hundreds of workers. In connection with the plant breeding programme, the Russian workers under the leadership of Vavilov decided to collect every variety of every eco-

nomic plant that could be possibly grown in the Soviet Union. The aim was that material of every kind should be available for breeding work, as this would make the production of desirable types more certain. Large expeditions were sent out for this purpose, some even to very distant parts, such as S.America. Further plant material was.gathered by exchange and correspondence. These extensive collections have incidentally thrown much light on the laws governing the distribution of economic plants.

Before this work, it was general for botanists to assume that the natural distribution of cultivated plants has been so much altered by man that it was impossible to formulate any laws governing their distribution. The work of Vavilov and and his collaborators has shown that such an assumption is quite wrong. They have shown that the laws which apply to the distribution of wild plants also apply to the cultivated plants. Every cultivated species also spreads in a regular order. This takes the form of radiation from a certain centre. This centre is characterised by exceptional abundance of varieties and forms. The number and variety of characters seen in this area is also not found anywhere else,. Many characters are endemic to this area, i. e., they are unknown outside this area. The forms occuring in these centres often combine characters usually found in separate species. Further the characters and genes found in these centres are also of the primitive type. They are often those associated with the related wild forms and are genetically dominant. Such centres of greatest diversity are therefore regarded as the original centres of distribution of a particular species, in fact its original home. As one moves away from these original centres, the population tends to become more and more uniform. There is a progressive decrease in the variety and number of characters present. Simultaneously, the proportion of dominant genes decreases.

On this basis, it is possible to determine the original home of every species of cultivated plant. If we take barley as an example, we find there are about 120 varieties of this cereal. Three alone out of these are at all widely distributed. The large mass of them are concentrated in the mountains of Abyssinia. We, therefore, conclude that Abyssinia is the original home of barley. Following this method for every cultivated plant, it has been found that most of them originated in a few primary centres.

The most important centre for the origin of food plants in the Old World lies between the folds of the Himalayas and

Hindu Kush, i.e. the region extending from the Punjab in N. W. India to Afghanistan and Caucasia. Here originated the bread wheats, most of the important legumes, Asiatic cottons, small seeded flax, many oil plants, onion, almost all the fruits growing in the temperate regions, such as the plum, apricot, peach, almond, cherry, apple, pear, grape-vine, walnut, straw-berry, goose-berry, black-berry, etc. Another important cereal, rye, also developed in this centre.

Abyssinia is the home-land of hard wheats, barley, millets, sorghums, sesame and coffee.

Tea, soya bean and many citrus fruits originated in the mountains of Northern Assam, and Eastern and Central China.

The Indo-malayan area is the home of banana, coconut, sugarcane, mango and many other tropical fruits. Rice also probably originated in this area or perhaps in the Philippines.

Finally, the countries bordering the Mediterranean on the north are the native home of oats, beet, figs, large-seeded flax, cauliflower, cabbage, etc., and some legumes.

Two more centres lie in the New World, one in Central America, the second in the mountains of tropical S. America. Maize, potato, American cotton, cacao, tobacco, the rubber plant and many cucurbits originated in these centres. A more complete list is given a little further.

A common characteristic of all these regions is that they are mountainous. As the earliest agriculture could develop only in the regions where important food plants were found, it must have been of the dry type. Irrigated agriculture must have appeared later and the great civilisations that developed in river valleys must have been preceded by others established in comparatively dry mountainous regions. A fact deserving special attention here is that Egypt is the original home of no important food plant. Not one of the many plants cultivated in ancient Egypt originated in that country. Earliest agriculture therefore could not have developed there, and Egypt could not be the cradle of civilisation. If the earliest civilisation was based on the cultivation of wheat, the most nutritious cereal that man found in the Old World, it could have developed only near about Afghanistan.

ORIGIN OF THE PRE-COLUMBIAN AMERICAN CIVILISATIONS:

The next question that I intend to take up here is the origin of the pre-Columbian civilisations in America. It is well known that, when the Spaniards reached America about the end of the 15th century, there existed highly developed civilisations in Mexico, Yucatan, Central America, Bolivia and Peru. The destruction of these civilisations forms one of the darkest chapters in the history of European nations. Although it is less than 500 years, when this great human tragedy occurred, the extermination of these people was carried out with such ruthless cruelty and so rapidly, that our knowledge of these civilisations is little better than those of the Indus and Nile. Their origin is shrouded in complete mystery, so that there is a great deal of controversy on the question. Did they develop from contact with the civilisations of the Old World? Or, did they develop quite independently? These are the questions asked. According to Smith and Perry, whose views I have already stated higher culture before Columbus was carried to the New World from Egypt, via India, Malaya and Polynesia, by the heliolithic people or 'children of the sun' in search of gold and pearls. A book givinga somewhat similar theory about the origin of the old American civilisations appeared last year in this country. It is by Chaman Lal, and entitled 'Hindu America'. The author believes that the ancient civilisations of America owe their origin to the Hindu culture of India. The Hindus, according to him, were great traders, travellers and adventurers. They had ships to go across the seas and colonised America long before Columbus. The book has appealed to many people in our country, as is clear from the opinions of several of our leaders given on the cover of the book. It gives much pleasure also to me as an Indian to learn about the greatness of my fore-fathers. Here, however, we have to examine the question as students of science and to see what light the distribution of food plants throws on this question.

When we study the dispersal of plants in recent times, we find that plants spread very rapidly from one country to another with similar climate, even over long distances, as soon as means of communication and transport are established. Even many quite useless species begin to grow in foreign lands, if their seeds happen to be carried there by any chance. Thus many Central American plants have become naturalised recently in this country as weeds. Many of them have actually become troublesome pests. This is the case for example with the common Mexican poppy, *Argemone mexicana,* and the water hyacinth.

The plants of economic value spread even more rapidly. Being useful to man, they are carried by him purposely from place to place. Thus maize reached China from Europe by land within 25 years of its introduction from America into Spain. Similar is the story of the spread of tobacco, even though it is not a food plant and everyone can live without it. Only 16 years after the first voyage of Columbus it is said to have reached S. India through Portugese sailors, and even though there was a great deal of propaganda against it, its use spread in a short time to every part of the world. Therefore, in order to decide the question of contact between the two worlds before the voyage of Columbus, what we have to do is to compare the lists of the food plants cultivated in each at that time. The lists, as prepared by Merrill, are given below.

List of Old World Food Plants:

Among the cereals wheat, barley, rye, oats, millet, pearl millet, sorghum, rice, teff, ragi and coix; for convenience, buckwheat, though not a true cereal, may be included. Among the vegetables the turnip, cabbage, rutabaga, rape, chard, mustard, radish, beet, parsnip, carrot, onion, leek, garlic, shallot, spinach, eggplant, lettuce, endive, salsify, celery, asparagus, globe artichoke, pea, soya bean, cow-pea, chick-pea, pigeon-pea, lentil, broad, hyacinth, and asparagus beans, taro, yam, sugarcane, sesamum and various others. Among the fruits the apple, pear, plum, cherry, wine grape, apricot, peach, prune, olive, fig, almond, persimmon, quince, pomegranate, jujube, melon, watermelon, cucumber, and in the warmer regions the banana, coconut, orange, lemon, pomelo, lime, date, mango, breadfruit, jak fruit, rambutan, litchi, longan, mangosteen. Practically all the cultivated forage crops, including the hay grasses, clovers and alfalfa are also of Eurasian origin.

List of New World Food Plants:

Maize, potato, sweet potato, cassava, all varieties of field and garden beans, as well as the lima, scarlet runner, tepari and yam beans, tomato, chillies, sun-flower, Jerusalem artichoke, squash, pumpkin, arrowroot, peanut, chayote, papaya, avocado, pineapple, custard apple, soursop, cherimoya, guava, cacao, cashew, sapote, white sapote, sapodilla, star apple, and mamei.

We find from these lists not a single important food plant common to the two hemispheres. Among other cultivated plants of major economic value the only one common to the

two hemispheres before the 15th century was cotton. American cottons are, however, very different genetically from the Old World cottons and the two hybridise with great difficulty. American agriculture before Columbus was thus based entirely on native American plants. It must have developed independently of the Old World agriculture and could not have been influenced by the latter. If agriculture in America originated independently, it seems very reasonable to conclude that civilisations based on this agriculture also developed independently of the Old World civilisations.

The lists of the domesticated animals of the two hemispheres yield evidence that also leads to the same conclusion. The Old World in 1492 possessed the horse, cow, sheep, goat, swine, buffalo, yak, camel, dog, goose, duck, hen and pigeon. The New World had the lama, alpaca, guinea pig, dog, muscovy duck and turkey. The only animal common to the two worlds was dog and we know from actual records that the dog was domesticated by man while he still lived a nomadic life. His help in hunting must have proved extremely valuable to early man. The dog is in fact a race-old companion of man. It is on account of this long association that men and dogs pull on so well in modern times.

Similar evidence is provided by the history of the spread of the venereal disease with the poetical name of syphilis. I do no know why it is named after a character in an Italian drama. It was unknown in the Old World before the voyage of Columbus, but was present in a more or less endemic state in certain parts of America. The Spaniards contracted it from the women of Haiti, and within a hundred years of the voyage, after the last Caribaean beauty was dead, Europe was poisoned from end to end by syphilis. The New World had its revenge on the Old. The disease has now spread to every corner of the globe.

Thus from every kind of biological evidence, it is clear that there was no contact between the Old and the New Worlds before the time of Columbus involving civilised people. The early man appears to have crossed from the Old World to America while he still led a nomadic existence. The journey was performed probably via the Bering Strait, with the dog as his only companion. He continued to lead this nomadic life as long as he was in N. America, living by hunting and fishing. Finally he reached Mexico and then parts of S. America. Here he met maize, potato and other food plants. Gradually he learnt

to cultivate them. When food supply became permanent and dependable, higher culture and civilised communities developed comparable with the civilisations of the Old World.

Acknowledgements and References

I have obtained muce information in the preparation of this address from the following three publications and take this opportunity to express my gratefulness to their authors.

Halnane, J. B. S. Prehistory in the light of genetics. *The inequality of man.* Penguin Books, 1938.

Hudson, P. S. Genetics in its application to plant breading *Biol Review*, 12, 1237.

Merrill, E. D. Demesticated plants in relation to the diffusion of culture. *Botanical Review*, 4, 1937.

For further insormation reference may be made to these papers and the iiterature cited therein, particularly in the last two.

WATER-ALCOHOL COMPLEX

HARIRAO J. ARNIKAR, M.SC.

Complexes are usually assumed to be formed in those media which give abnormal values for the transport number of ions. In the case of silver nitrate, however, Carrara (1903) finds the transport number of the cation in non-aqueous media to be the same as in concentrated aqueous solutions. This finding of Carrara with respect to the silver ion is not confirmed by later workers, Sachanov and Grinbaum (1915), and Krummreich (1916), whose data lend support to the view of complex formation. In the present paper, results are reported for the transport number of silver ion at constant temperature in M/20 solutions of silver nitrate in water-methyl alcohol media of varying composition. Data for the corresponding variations in the density, viscosity, surface tension, coefficient of apparent volume expansion, and electrical conductivity are also recorded and from these data the formation of a complex in the medium of a certain composition is shown to be justified. Other known data for the water-methanol system are also cited as additional evidences.

Experimental.

Using a large water-bath 3′×2′×2′ stirred by an electric motor, the temperature could be easily maintained at 22°C±0.2 for 3-4 hours at a time. The usual Findlay apparatus was used for the determination of the transport number of silver ion by the direct method. By means of variable resistances in the D.C. lamp circuit, a steady E.M.F. could be applied to the transport number cell. The current was indicated by a sensitive milliammeter and was kept constant. To measure the electricity passed two copper coulometers were used in series and the weights of the copper deposited in the two cells were always concordant. The concentration of the solutions with respect to silver nitrate was kept constant, being M/20 in all the experiments, only the water-methanol ratio of the medium was systematically varied. The changes in the concentration of the electrolyte in both the anode and cathode chambers were determined by titrating the neutralized liquids against N/20 potassium chloride solution, using potassium chromate as the indicator. All the chemicals used were of Merck's G.R. type, and the methanol was redistilled.

The relative viscosity and surface tension of the medium were determined by using the Ostwald's viscometer and stalgmometer respect vely. A pyknometer was used for determining the coefficient of apparent volume expansion over the range 15°-30°. The specific electrical conductivity was found

by the usual Kohlrausch's Bridge method. The cell constant, determined by 0.0$_2$N potassium chloride solution, was found to be 0.3786. All the experiments were made at the same temperature, namely 22°±0.2 and the results are shown in the following table, and in the accompanying graphs (1) and (2), in which the different properties are plotted against the composition of the medium in terms of per cent methyl alcohol.

Results.

TABLE

System : M/20 A_gNO_3 in Water-Methyl Alcohol Medium.
Temp. : 22°±0.2.

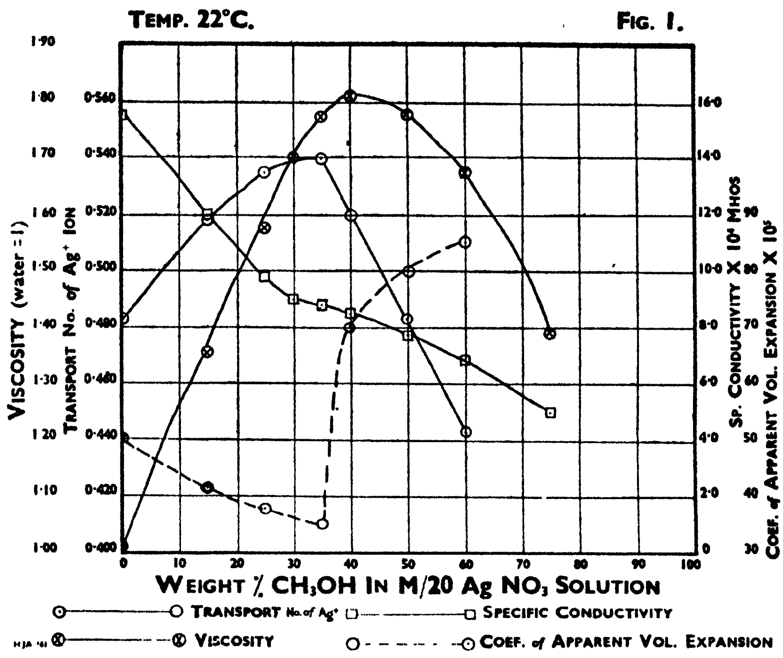
%CH_3OH by Weight. 6	Trans. No. of Silver Ion.	Density (water-1)	Viscosity (water-1).	Surface Tension (water-1)	Coef. Vol. Expansion (Apparcng) $\times 10^5$	Specific Conductivity $\times 10^4$ mh.
0	0.482	1.0070	1.010	0.9863	50.0	15.5
15	0.518	0.9863	1.355	0.7348	41.5	12.0
25	0.535	0.9727	1.575	0.6310	38.0	9.8
30	..	0.9650	1.701	0.6002	..	9.0
35	0.540	0.9570	1.775	0.5750	35.0	8.8
40	0.520	0.9499	1.809	0.5409	70.0	8.5
50	0.483	0.9317	1.780	0.4914	80.0	7.7
60	0.443	0.9072	1.674	0.4436	85.0	6.8
75	..	0.8824	1.392	0.3854	..	5.0

Discussion.

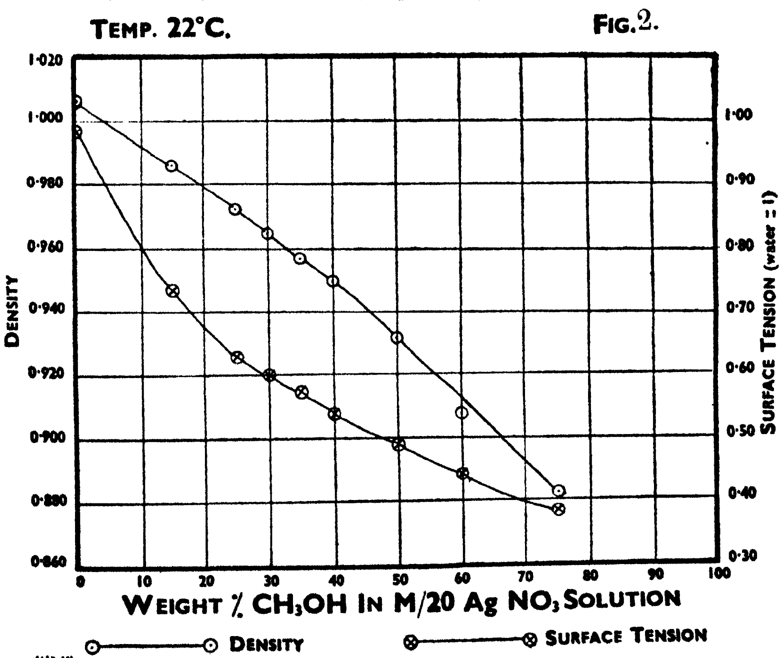
The results show that the transport number of the silver ion rises with the methyl alcohol content of the medium up to a certain maximum and then falls. This variation in the transport number of the silver ion is very similar to what Krummreich (1916) had found in a similar system, viz. M/100 silver nitrate in water-ethyl alcohol at 40°C. This maximum in the transport number was attributed by him to the formation of a water-ethyl alcohol complex. A similar assumption, no doubt, must be made in the present case of water-methyl alcohol as well. From the position of the maximum, (about 35% by weight of methyl alcohol), it is apparent that the complex may be roughly $CH_3OH.3H_2O$. It may be mentioned here that Jahn (1907) too had observed a similar variation in the aqueous-alcoholic solutions of barium chloride.

Of the other properties of the medium studied here, viscosity shows a maximum, dilatation coefficient a minimum and the electrical specific conductivity a sharp change in the slope of the curve, the decrease being rapid up to the critical point

and more slow after that, (Figure 1). The surface tension and



the density of the medium, however, vary along smooth curves without any abrupt change, (Figure 2).



Basing their conclusions on the viscosity data for pure water-alcohol systems, Getman, Dunstan, Traube and Poiseuille (Monogram on Viscosity, 1914), have long since shown that complexes of the type, $EtOH.3H_2O$, $MeOH.3H_2O$ and $PrOH.2H_2O$ are formed at ordinary temperatures. The results of the present paper are fully in accord with their theory.

Available data from standard tables for the specific heat, refractive index, freezing point, and the absorption spectrum in the infra-red, for pure water-methanol system, also show maxima.

Thus the weight of the evidence seems to support the view of complex formation of the type $CH_3OH.3H_2O$. It should, however, be pointed out that the breaks in the curves for the different properties of the medium do not occur at any one unique position. Nor is this expected. While a maximum or a minimum implies complex formation, its position cannot, however, be taken to indicate the true composition of the complex owing to the equilibrium that may exist between the molecules forming the complex and the rest of them lying as an inactive mixture. The complex if present alone would show the true maximum, while the inactive components would follow a linear mixture law by themselves, and when there is an equilibrium between the two the maximum gets shifted towards the component of greater magnitude. This view held primarily with respect to the maxima in the viscosity curves of pure alcohol-water mixtures, (Viscosity Monogram 1914,) no doubt, may be expected to be valid for other properties as well.

In a recent paper Padmanabhan and Joshi had reported of a minimum in the specific electrical conductivity of the same system. This finding of theirs does not find confirmation in the results recorded here, there being no minimum but only a sharp decrease in the slope of the conductivity curve at about the composition of the complex, (see figure 1).

My thanks are due to Dr. S. S. Joshi and Mr. K. Ramdass for their kind help.*

References.

1. Carrara, *Gazetta*, 1903, 33, (i), 241.
2. Sachanov and Grinbaum, *J. Russian Phys. Chem. Soc.*, 1915, 47, 1769.
3. Krummreich, *Zeit, Phys. Chem.*, 1916, 22, 446.
4. Jahn, *Zeit, Phys. Chem.*, 1907, 58, 641.
5. Dunstan and Thole, "*Viscosity*", (Monogram on Physical and Inorganic Chemistry Series), 1914.
6. Padmanabhan and Joshi, *J. Ind. Chem. Soc.*, 1938,4 176.

*An abstract only of this paper has appeared in the *Proc. Ind. Science Congress*, 1941, (Benares), Part III, p. 58.

SERICULTURE AND SILK INDUSTRY IN INDIA.

C. C. Ghosh, B.A., F.R.E.S.,

and

A. B. Misra, D.Sc., D.Phil. (Oxon), F.R.E.S.,

Silk is obtained from a caterpillar called silkworm which, when fullgrown, spins it out from glands in its body and builds with it a cocoon for the protection of its own helpless pupal state. Man has found out means of utilising the filament of this cocoon in making garments, and, therefore, rears the worms with care to produce cocoons for him and this work is known as Sericulture. What is commonly known as silk, the shiny creamy white fabric filament so much prized, is obtained from the worm (*Bombyx mori* and its races) feeding on mulberry (*Morus* spp.) leaves. Silks of other kinds and qualities are obtained from other kinds of worms feeding on other leaves. *Tasar*, a coppery coloured silk, is produced by caterpillars (*Antherea mylitta*) feeding on Asan (*Terminalia tomentosa*), Sal (*Shorea robusta*), Arjun (*Terminalia Arjuna*), Ber (*Zizyphus jujuba*) and thirteen other forest trees. *Muga*, a golden coloured silk allied to tasar, is obtained from worms (*Antherea assama*) feeding on *som* (*Tetranthera monopetala*), Champa (*Michelia oblonga*) and Mozankuri (*Litsea citrata*). Chinese *tasar*, a brown silk, is the product of a worm (*Antherea pernyi*) feeding on oak leaves and Japanese *tasar*, a light green silk, that of a worm (*Antherea yamamai*) also feeding an oak leaves. Eri silk, a creamy white stuff less shiny than mulberry silk, is obtained from worms (*Attacus ricini*) feeding on castor leaves. The word 'eri' is derived from the Sanskrit name of the food plant, eranda, changed to erandi, endi or eri. There are other kinds of silk-worms but as they are not of commercial importance no attempt is made at rearing them. Out of the silks named above that produced by the mulberry-feeding worm is the most important, and is much in demand on account of its superior properties.

Habits of the silk worm.

There is a similarity in the lives of the different kinds of silkworms in that the moths lay eggs from which caterpillars hatch, feed, grow and spin cocoons inside which pupation takes place. Moths then develop from the pupa, emerge from the cocoon by piercing it at one end, mate and lay eggs. This life-cycle is repeated. Emergence from the stiff cocoon is helped

by the ejection of a fluid from some glands in the body of the moth which softens the gum in the cocoon shell and the moth can then break through the loosened filament layers. This fluid has been named Sericinase by the Japanese sericulturists and can be collected from newly emerging moths.

The different kinds of silkworms differ a great deal in their habits and in the cocoons which they form. Mulberry and eriworms have become completely domesticated, can be kept indoors and fed with leaves, and are, therefore, completely controlable. These silks can be produced under suitable conditions in large quantities. Tasar worms live in the wild state in nature on jungle trees upon which they feed at will and need to be protected against the onslaught of birds and other enemies. The rearing of the tasar worms and the production of tasar silks are, therefore, limited in extent and restricted to certain areas. The Indian tasar worm occurs mainly in the forest areas of Chhotanagpur in Bihar and the districts contiguous to and surrounding it. Muga is confined to certain parts of Assam. The Chinese tasar is reared in Shantung Province of China and the Japanese tasar in the hill regions of certain districts of Japan. The cocoons of the different worms differ in their structure. A single unbroken filament is capable of being unwound, or as it is called reeled, from the cocoons of mulberry-feeding and tasar worms. Eri cocoons are not reelable, and have to be carded and spun into thread, more or less, like cotton and wool. Herein lies the principal reason of inferiority of erisilk to mulberry silk. Production of erisilk also is restricted in extent and confined mainly to Assam and a few eastern districts of Bengal. Attempts to establish it in other parts of India have not met with success.

Sericulture in India and abroad.

Sericulture, which commonly connotes the rearing of mulberry-feeding silkworms, is an important industry capable of being carried out for *at least a part of the year everywhere.*

Climate has an important effect on the life-history of this worm. Its races, occuring in cold countries, breed only once a year in spring. Eggs laid after the sping cycle do not hatch until the next spring and for successful hatching require to be subjected to a cold temperature of about 35 to 40°F. for about four months and then to be incubated at about 75°F. The races occurring in hot countries are multivoltine or many-brooded, each cycle occupying only about six weeks, this period however being lengthened in the cold weather. Their eggs

hatch, under normal temperature, in about a week without any special treatment. Univoltine worms, if reared continuously in hot places, can be turned into multivoltine and the reverse of it is also possible when rearing is done continuously in cold climate. Bivoltine and even trivoltine and tetravoltine worms are also met with. Univoltine worms are reared in Japan, Northern China, Kashmir, Iran, Palestine, Iraq, Egypt, Syria, Turkey, Samarkand and Tashkent in Russia, Cyprus, Greece, Albania, Macedonia, Bulgaria, Czechoslovakia, Jugoslavia, Rumania, Hungary, Poland, Italy, France, Spain, Algeria, Morocco, Madagascar, Mexico and Brazil. Some of the countries just mentioned are noted for their heat in the hot weather. Rearing is done in the spring following the winter. Multivoltine worms are reared in Southern China, Indo-China, Siam, Burma, Assam, Bengal, Madras and Mysore. Japan and China rear bivoltine worms also but to a small extent. Silkworm rearing has been attempted in the United States of America, England, Germany and in U. P. near Dehra Dun, but did not succeed mainly on account of economic reasons explained below. Attempts are being made to introduce sericulture into other countries, for instance, South Africa.

Origin and Spread of the Industry.

The ancient history of the discovery of the utility of the silkworm's cocoon is interesting. Its origin is lost in antiquity, but China is supposed to have been the birth place of this industry. The discovery of the art of unravelling and reeling out the unbroken filament of the cocoon is ascribed to a Chinese princes, Si Ling Chi, circa 3000 B.C. This art is said to have been kept a close secret by China for nearly 3000 years, when a Chinese princess married a prince of Turkestan and carried the art there, smuggling silkworm eggs in her plaits of hair. From there, two Nestorian monks smuggled eggs into Byzantine about 550 A.D. Venetians introduced the art in Italy about 1204 A.D. during the Crusades, and it spread to other countries in Europe from Italy, where great improvements were effected in the rearing of worms, reeling, processing of the yarn and manufacture, which again were kept a guarded secret here for a long time. Refugees from the Italian civil wars of the 15th century carried the art to Lyon in southern France which afterwards became a famous silk manufacturing centre. Refugees from religious persecution in France, after the revocation of the Edict of Nantes, carried it to England, Holland and Germany. In the east, too, refugees from Chinese civil wars carried the industry to Korea from where captives of war carried it to Japan in the third century B.C. The industry travelled

to Cochin-China, Siam, Burma and India from China. According to another view, it is supposed to have developed independently in India in the Himalayas whence it spread to China and India. Silk is mentioned in the ancient religious books of India and was unknown in Egypt and Babylon.

History of Sericulture in India in Recent Times.

Lefroy was the first to undertake the study of sericulture on scientific lines at Pusa in 1950-6. A large thatched cottage, known as the Silk House, was erected, and growing of eri and mulberry for feeding the silk worms was also undertaken. All stages of the industry, from the food plant to the hand loom, were experimented with for the first time in India at Pusa by Misra and Ghosh under the directions of Lefroy. So much so that this undertaking attracted the attention of the Government and the public. From 1905 to 1910, a systematic attempt was made by these three workers to tackle various aspects of the sericultural industry and Ghosh published the first account of the work done on Erisilk in a Bulletin on this subject. When the Government of U. P. organised an All-India Exhibition at Allahabad in 1910, Lefroy set up a sericultural stall there to revive the interest of the public in this decadent industry. All stages of this cottage industry, from the egg to the rawsilk and the loom, were shown there to hundreds of thousands of visitors. In order to place in the hands of the literate public an account of the various processes, Misra was commissioned by Lefroy to write a pamphlet[2] in English on mulberry silk rearing and another on eri culture in Hindi[3] and Urdu.[4] In these pamphlets, detailed information about Eri and Mulberry5 silk-culture was given by C. S. Misra and the texts were appropriately illustrated. As the information contained herein, was based upon the work done in Pusa, it had the sanction of experience and experimentation, and, therefore, provided excellent reading matter to the public. Notwithstanding the lapse of nearly 30 years, these publications are still mines of information on this subject, and have lost nothing of their importance by the passing of time.

In 1912-13 M. N. Dey was appointed in Pusa as the Sericultural Assistant, and took over the entire charge of the Silk House stationed there. Besides carrying on the routine duties, he engaged himself in many a trial experiment on the uni and-multivoltine races of silkworms, and assisted Hutchinson in his study of the Pebrine disease of the silkworm. For a time, the work of Hutchinson so dominated the routine work of the Silk House that other activities of it were relegated to the back

ground. Hutchinson[1] published his memoir on the Pebrine Disease of Silkworms in—and this led to the appointment of Jameson,[2] a protozoologist, to investigate afresh the whole problem of Pebrine disease. In the meantime, Lefroy left India and his successor was not enthusiastic about this. The Silk House remained in Pusa for a few more years, and in 1917-18 arrangements were made with the Bihar Government to transfer the Silk House to Bhagalpur, the services of Dey being also placed at the disposal of the Bihar Government.

Ghosh's interest in sericulture did not die out after his posting in Burma as is shown by the fact that in 1932 he pursuaded the Burma Government to let him visit Japan and Europe on long leave for the specific purpose of gaining first hand information about the conditions obtaining there. His visit to some of the important silk-producing centres in the world gave him excellent opportunities of gaining an inside view of this industry, and resulted in the publication of an excellent Monograph1 on the subject. On his retirement from Burma, his services were commissioned by the Bengal Government to foster this decadent industry in Bengal. Already, during the short period that he has been at the helm of affairs, the industry has made a great headway in several directions, and the outbreak of hostilities in Europe and Asia has given an unforeseen fillip to the industry.

The industry has made a substantial headway in Kashmir. "The entire industry from the planting of mulberry to the production and disposal of raw silk is carried on by the State on monopolistic basis." The progress of Kashmir industry in silk is due mainly to the efforts of the Kashmir Durbar and to the talent and industry of the officials of its Sericulture Department. His Highness' Government spends 13 lacs of rupees annually on the upkeep of this industry in Kashmir and Jammu. About 52,000 families are engaged in rearing the worms in their spare time and find the occupation renumerative.

Sericulture is carried on in the Mysore State also. About 30,000 acres of land are under mulberry in this State which enjoys certain natural climatic advantages. Its climate is mild, the temperature ranging between 70-95°F., rainfall is limited and the fly pest is altogether absent. The Sericultural Department of the State spends about 2½ lacs of rupees annually, and there are signs of improvement in the industry in several directions. The services of foreign experts were requisitioned by the State in the past but now the Department is staffed with three Indians who have had their training in Japan.

The silk of commerce is produced by insects belonging to the lepidopterous Families, Saturniidae and Bombycidae. Nearly 30 species of insects belonging to these Families are capable of producing silk of one kind or another. Of these, however, only a few species are exploited by Man for producing the silk of commerce. The more important of these are *Attacus ricini* (the eri silk worm), *Antherea paphia* (the tusar silk moth), *Antherea assama* (the Muga silk moth) and *Bombyx mori* (the mulberry silk moth). In China and Japan, a few other species of silk-moths are also utilised for this purpose. The common feature of these silk-producing moths is that they spin a cocoon of silk for the protection of their pupae, and Man has discovered the means of robbing the silk filamentf rom these cocoons which he has now learnt to rear in captivity. It goes without saying that these moths were and some of them still are habitually accustomed to live in the jungles in the wild state. This is still so in the case of the Tusar and the Muga moths which have defied all attempts at domestication. It seems that all the various kinds of moths were wont to live in the way that the Muga and the Tusar moths do at the present time until somebody took a fancy to their cocoons and succeeded in domesticating a few of them to an useful end. That was undoubtedly an epoch-making effort for it placed in the hands of Man a source of untold wealth. Tradition has it that this discovery was made in China in the dimness of the past of which we have no written history. The Chinese civilisation is as old as it is great, and the Chinese have been the discoverers of many good and great things which have contributed to the richness of human life. They are endowed with a keen intelligence, penetrative insight, manual dexterity, manipulative skill and a peculiar genius for making discoveries and inventions. Their ancient history bears ample evidence of this. No wonder, then, if a people so rich in talents were able to see the vast potentialities of the silk filament of the cocoons of these moths, and were siezed by a passionate desire to domesticate them. Those of us, who have some knowledge of the difficulties involved in an undertaking of this nature and who are conversant with the scientific literature bearing on the domestication of wild forms, will no doubt acknowledge it to be a yeoman's performance. But, though the task may have been arduous and unpromising in the beginning, the success of the effort has more than repaid the investment in time and labour. It is impossible to estimate the value of the silk reeled, spun and woven since the day when these moths gave up their wild habits and became domesticated, or even to estimate the value of the comfort it has given to its wearers. The Chinese are also believed

to have been the breeders and cultivators of the various kinds of gold-fishes which have become so completely domesticated that they now adorn our drawing rooms and live within the confines of a bowl of water.

One of the most important aspects of the silk industry is sericulture by which we mean the cultivation of the silkworm and its favourite foof-plant. Silk industry cannot flourish unless it is sustained by an adequate supply of reeled thread to the mills and spindles. So that, other things being granted, a flourishing silk industry requires production of cocoons on an adequate scale and the rearing of the worms on a very extensive scale. The rearing of the silkworms is, therefore, a very necessary and important adjunct of the silk industry. It will, therefore, be appropriate to indicate here briefly the methods of rearing the worms and of reeling the thread from their cocoons. So far as India is concerned, the mulberry wilkworm stands pre-eminent in that it is the source of the fine glossy silk which is prized above all the rest.

The rearing of the silkworm.

The rearing of the mulberry silkworm is carried out in a seed rearing house which may be nothing more than a large thatched and well-ventilated hut made up of split bamboos and straw. It usually has a clean *kutcha* floor and is provided with two entrances and several large windows. In order to keep the temperature inside it cool in summer and warm in winter, the floor may be sprinkled with water in the former season, and charcoal fire-grates, locally known as 'angithies', may be used in winter to warm up the interior. Since the mulberry silkworm feeds voraciously on mulberry leaves, a large supply of them has to be maintained in order that the supply may not run short of the demand. On an average, eighty to ninety seers of mulberry leaves are consumed by worms yielding a seer of silk filament. For this purpose, several acres of bush mulberry need to be cultivated. If facilities of irrigation be available, then $1\frac{1}{3}$ acres of bush mulberry can yield 300 maunds of leaves, and 600 seers of green cocoons can be obtained from worms fed on them. Along the sides of the seed-rearing house, *machans* are fixed upon which several tiers of feeding trays are kept. The trays are rimmed and generally measure $3' \times 2'$ in size, in which the freshly hatched out worms are fed with chopped mulberry leaves. The feeding trays need to be cleaned every day by transferring the worms to other trays. When the worms are fully grown, they become eager to spin the cocoon round themselves. At this time, they should

be transferred to a '*Chandraki*' which consists of a spiral two inches high upon a foundation. The worms can also be induced to spin cocoons inside crumpled straw, paper shavings and other similar material. In localities where reeling is done, the cocoons are at once sold to the reeling factories, but if that is not possible, then the cocoons are stifled either by exposure to the sun for two or three days or by the action of steam. At the time of reeling, the stifled cocoons are simmered in a basin of hot water for about ten minutes and continuously stirred with a few pieces of sticks so that their outer portion is loosened and removed in the form of long tapes and the end of the continuous filament is found. The filament of several cocoons are then picked up and passed through the glass eye on to the reel. The thread thus reeled forms the raw silk of commerce.

The eri-silkworm produces cocoons which are not made up of a continuous filament, and, as such, they have to be spun by the hand very much in the same manner as cotton. The fineness of the spun thread depends upon the skill of the spinner. The life-history of the eri-silk moth occupies—days, and several broods of this silkworm can, therefore, be reared in suitable localities. In those parts of India where there is a spell of dry hot weather, the worms will not survive the heat of the summer (March to the end of June). In such localities, the rearing can be carried on, on a large scale, only till March when the stock may be reduced and only enough worms kept on hand to keep the race going until the begining of the monsoon. In U.P., C.P., and parts of the Punjab it may even be necessary to stop rearing the worms in March and to keep the eggs in a refrigerator till the onset of the monsoon. This will enable the rearer to tide over the period of unfavourable weather. The eri silkworm also passes through for stages—(*a*) the egg, (*b*) the larva, (*c*) the pupa, (*d*) and the adult moth. The eggs hatch out in 8 to 12 days. They turn grey before hatching, and the young worms that come out of them are of a greenish-yellow hue with black spots. The larvae undergo four moults and then attain the perfect form. When about to moult, they stop feeding and become motionless for a few days when they should not be disturbed. A split occurs on the dorsal side of the worm near its head and the worm wriggles out of its old coat. After the last moult, the worms eats voraciously, and, when the appropriate time comes for them to pupate, they stop feeding and wander out hither and thither in search of a suitable place to pupate. At this time they should be transferred to a spinning basket containing wood shavings, dry leaves, straw or similar other material. The worms secrete

cocoons round themselves and pupate inside them. The cocoon of the eri silkworm is made up of two layers and, in this respect, it differs from that of the mulberry silkworm. Since it is not made up of a continuous filament, no harm is done if the moth is allowed to emerge from the cocoon. Hence, in this case stifling is not resorted to.

The moths, on emergence, begin to pair and are not be disturbed in this condition. After remaining in copula for 24 to 36 hours, the females are to be separated from the males and kept separately when they lay singly, on an average, about 80 eggs.

The cocoons contain the cast off skin of the pupa and the larval droppings. Only the outer layers of the cocoons should be spun and the inner portion rejected. Often a reversing machine is used by which the cocoons are turned inside out, and the effete contents of the cocoon are removed. After this, the cocoons are soaked and washed with clean water until all the adhering dirt is removed. The cocoons are next placed in boiling water to which washing soda is added. The cocoons are then washed in several changes of clean water. After this, spinning can be done with *Taku*, *Charkha*, or the Pusa Continuous Machine. Thoroughly dry cocoons are good for spinning with *charkha*, but wet cocoons are used in spinning with *Taku* or the Pusa machine.

The Tasar and the Muga silk moths exist in the wild state in certain parts of India, especially Assam, U.P., Punjab, Central India Agency and the Central Provinces. The favourite host plants of the larvae of these moths are *Terminalia tomentosa*, *T. arjuna*, *Shorea robusta*, and *Zizyphus jujuba*. The forest tribes collect the cocoons of these moths in sufficient quantity to make them a marketable commodity. The cocoons of these moths are made up of a single filament, and, therefore, stiffling has to be resorted to in order to preserve the filament in an undamaged state. Were the moths permitted to escape out of the cocoon, the thread would lose its continuity and become unreelable. The forest tribes, however, allow the moths to emerge from a certain number of them, so that sufficient number of male and female moths become available for continuing the race. The female moths are tied to the shoots of the host plants by means of a string or thread but the males are liberated by them. In course of time, the females attract the males, and copulation and egglaying follows. The larvae, on hatching out of the eggs, wander about on the host plants devouring their foliage and growing at their expense.

UNIVOLTINE AND MULTIVOLTINE SILKMOTHS.

Unibrooded races of silkmoths are endemic to cold countries having a short summer, and multivoltine ones are natives of warm and moist countries enjoying a long spell of summer. Uni- and multivoltine races of *Bombyx mori* (Mulberry silk moth) are known to us; uni- and bivoltine races of *Antherea paphia* (Tasar silk moth) are also equally familiar to us. But *Attacus ricini* (Eri silk moth) and *Antherea assama* (Muga silk moth) are completely multivoltine. It looks as if this trait is a function of temperature and food. It may be that these were the primeval causative agents which led to a change in this faculty of the moths, but the fixation of this trait could not have come about except through the medium of the germ plasm. Therefore, in some mysterious manner, the abundance of food and warm climate reacted upon the germ plasm of the progenitors of these races, and induced the development of multivoltine capacity in them. It may have happened by the mutation of a factor or factors, or by the loss or interpolation of a genetical factor. Whichever way it may have happened, the change from univoltine to bi- and multivoltine condition was a very welcome one, and must have filled the hearts of the early Chinese breeders with gladness. What we are now seeing is the end result of a long series of processes whose beginning fades away in the dimness of the past and we can only vaguely see the silhouette of events upon the elusive horizon of time.

The validity of this genetical conception of race production in these worms is proven not only by the genetical researches of the last 30 years, but also by the fact that the crossing of a bivoltine race with a univoltine one causes irregular eclosion of moths. The quality of the fibre, the length of the filament, the duration of a brood and the number of broods in a year are genetical traits of specific races, and the decadence of the tasar industry is no doubt due to promiscuous mating between the male and the female moths belonging to different races.

Eri, Tusar and Muga moths belong to the family Saturniidae. The eri silkmoth was once a wild species, but is now completely domesticated. May it not be that if well-planned and sustained efforts were made by geneticists to curb the wild instinct of the tasar and the muga moths, an additional channel of wealth will be opened out to us which will benefit generations of men yet unborn?

After the rearing of worms the next important stage of the industry consists in reeling out raw silk from the cocoon. Cocoons are boiled in hot water in order to soften

the gum and the reeler finds the ends of the continuous filaments from them, joins the filaments of several cocoons together and passes the combined thread on to a machine which winds it on a reel. This thread is known as raw silk. As the filaments of the cocoons with which reeling is commenced are exhausted, those from other cocoons are picked up and fed to the machine. The uniformity in thickness and freedom from impurities of the raw silk depends on the skill and care with which the reeler operates, the efficiency of the machine and the quality of the cocoons used in the work.

The raw silk is utilised in the manufacture of woven and knitted fabrics for garments, parachutes, parachute cords, fishing lines, elastic webs, sieves for flour mills, insulation coils for telephones and wireless receivers and tyres for racing cars. Fabrics for garments in various weaves, plain, twill, satin, crepe, georgette and velvet, knitted goods such as vests, gloves, socks, stockings etc., dyed, printed, embroidered, figured and ornamented fabrics for saris, jackets, shawls, wrappers, handkerchiefs, ties, gowns and table, umbrella and hatcloths are made out of this stuff. Machines and methods have been devised to convert raw silk into yarn suitable for different purposes. About a hundred trade names are in vogue to denote the types or kinds of yarn prepared to meet the requirements of the different trades. Dyes and methods of dyeing have also been invented to dye the yarn and the fabric in an infinite variety of colours and shades. Gold and silver threads are worked on the filament to produce ornamentation of the fabrics. Looms and knitting machines of diverse kinds and a multitudinous technique of weaving and knitting have been invented to produce different kinds of fabrics, knitted goods and ribbons. The remarkable Jacquard loom which weaves out figure in the fabrics during the process of weaving is an invention to satisfy the vanity of the fanciful wearers of silk.

No other textile fibre has aroused or commanded the world's admiration in the same way and to the same extent as silk which has rightly acquired and retains its position as the premier fibre. In the early days of Chinese monopoly of the trade, silk fabrics are recorded to have fetched their own weight of gold in the Roman markets.

Silk substitutes.

Scientists have succeeded in producing what is known as artificial silk or rayon, and this has displaced natural silk to some extent from the market. Search for cheaper substi-

tutes for silk has resulted in the invention of other artificial fibres, such as lanital from milk and vinyon and mylon from coal, to name only a few which are supposed to have great possibilities. The evolution of a cheap process of producing rayon from wood has resulted in a marked increase in its use. Nylon is also expected to have a great future before it. There is an apprehension in the mind of many a person that the fate of silk is sealed. This is far from being the case. Rayon has now come to occupy a place of its own as a distinct fibre like flax, silk and cotton in the textile world. The demand for silk has vaned but is again on the increase. No doubt the artificial substitutes have captured a certain section of the market. Since 1925 the world's production of silk has increased by about 50 per cent whereas rayon has lept up by nearly 700 per cent. The use of parachutes in the present war has now given a fresh impetus to this neglected industry in India and it is hoped that it will give a great fillip to this it in this country.

The industry in different states of development.

The silk industry exists in a primitive and wholely domestic state in Indo-China, Siam, Burma and Assam where mulberry is grown in the fields adjoining the rural habitations, rearing is carried on a small scale, reeling is done by the rearers themselves on simple and improvised machines and the resulting course and uneven raw silk is consumed by the local weavers on their handlooms. The fabric thus produced is coarse and uneven. In the more advanced state, raw silk is exported to other places (provinces or countries) and utilised there. For this purpose raw silk of a uniform thickness and free from impurities and defects is demanded, otherwise it will not yield a good return.

Raw silk is also produced in certain other countries as mentioned elsewhere, but is utilised in centres far removed from the place of its origion. For instance Japanese raw silk is used in Benares for making 'Saries'. In India also several provinces which produce no raw silk have nonetheless become manufacturing centres of admirable silk fabrics. The United States of America has developed a huge silk manufacturing industry which consumes the bulk of the world's output of raw silk. She employed 83 per cent of it in her mills in 1928, and consumed almost the whole of its produce of silk goods herself, only 1.5 per cent of it having exported to Canada and Mexico. More than 90 per cent of the raw silk used by the U.S.A. comes from Japan. On account of the high cost of labour, America demands raw silk of a highly uniform quality capable of being worked on power

machinery. She has evolved machines and methods of testing the quality of the raw silk. Japan has risen equal to the occasion by supplying it with raw silk of the required quality. Silk manufacturing industry is being developed in several other countries also especially in Canada and Australia. In all these countries the demand is for high grade raw silk only. Side by side with this, high grade fabrics are also in demand in the world's market. There is a vast difference between the primitive state of the industry such as it exists in Assam and the highly developed conditions which it has reached in the U.S.A. and Japan by means of painstaking researches, application of scientific methods, employment of skilled labour and the setting up of co-operative organisations. The development of a industry in a country, in modern times, is proportionate to the amount of research done on it and the organisation of technical and administrative talent in the service of that industry. In the highly developed and organised state, the several steps in the industry are virtually treated as independent auxilliaries (industries subsidiary to the main) and this leads to greater specialisation and all-round improvement. The following side-lines constitute the ensemble of the industry:

1. Growing and selling of mulberry grafts.
2. Growing mulberry and selling leaves to the silkworm rearers.
3. Rearing and selling of the seeds (silkworm eggs).
4. Rearing of silkworms and their cocoons.
5. Reeling raw silk from the cocoons.
6. Converting the raw silk into yarns for weaving different kinds of fabrics.
7. Manufacture of gold and silver threads.
8. Weaving of different kinds of fabrics.
9. Knitting of different kinds of articles.
10. Dyeing of the yarn and fabrics.
11. Printing of fabrics.
12. Finishing the fabrics.

The different stages of the industry:

The raw silk industry comprises cocoon production and reeling. The former is successful when carried out as a subsidiary occupation by the peasants and farmers. As the rearing of the worms is done by inmates of the family, it is possible to sell the cocoons at a small price which would be impossible if paid labour were to be engaged for the purpose. The price of raw silk, which governs the price of cocoons, is subject to periodical

fluctuations. When prices fall, it is able to survive the setback because it is essentially a cottage industry. As long as the rearers obtain some remuneration for their labour, they do not mind carrying on this work. In a country like India, where the climate is mild for the greater part of the year, several generations of the worms can be reared in a year thereby fetching an extra income to the rearers. When leaves are plentifully available, it does not take more that about a month to rear worms from the eggs and the cocoons are readily sold off. There is no agricultural crop which can bring in money so quickly. Although rearing is chiefly a cottage (domestic) industry, the reeling industry requires to be stationed at a place where a large number of families are engaged in this occupation so that reeling concerns may not have to collect small lots of them from several places, and the demand of the reelers may be met from one locality. Production of one to two hundred pounds of cocoons at a time by individual families is common but rearers are known to produce one to two thousand pounds at a time. The entire attention of the whole family is necessary to ensure success in a large scale rearing. A classical instance of the failure of large scale rearing, by paid labour, attempted on commercial lines is furnished by the undertaking of Lister and Co. near Dehra Dun. Rearing is not difficult, but its technique has to be learnt in a practical manner and it demands care and timely attention to details. Rearing, however, being a subsidiary occupation of the peasants is subject to the influence of several economic factors. When the peasants find an alternative renumerative occupation through the industrialisation of the area or another more remunerative money crop, they neglect silkworms rearing. This is why it did not succeed in England, Germany or U.S.A. Sericulture cannot flourish at a place unless there is an assured chance for the consumption of cocoons in the local reeling factories. Reeling factories, in their own turn, depend upon facilities for the disposal of the raw silk. The raw silk may be utilised in manufacture processes within the country itself or else it may be exported to other countries. Exportable raw silk requires to be of uniform quality and of the internationally accepted grades. Exportable raw silk in dealt in lots of 1333 lbs., and has to be of uniform quality. Therefore, it becomes necessary to engage several reelers at one place and to supervise their work. Reeling is, therefore, a capitalistic industry because buildings, godowns and machinery have to be erected, cocoons purchased, labour engaged and paid for and the raw silk is to be marketted. Organised large scale reeling is, therefore, a necessity, if large scale production or export is attempted.

The grade of a lot of raw silk can be determined only after testing it in a testing house, technically known as the Conditioning House. Raw silk being of a hygroscopic nature, buying or selling of it is done on its conditioned weight, which is the absolutely dry weight of a lot plus 11 per cent of it. The Conditioning House is required to determine the conditioned weight and the grade of the lots of silk intended for sale and to issue certificates on the basis of which negotiations are effected. The investigations of the two Tariff Boards set up in India in 1933 and 1938 brought out the fact that normally India utilises about 40,00,000 lbs. of raw silk in a year, out of which only about 15,00,000 lbs. are at present produced in the country, the rest of it being imported from outside. In addition to this about 11,00,000 lbs. of prepared yarn, 270,00,000 lac yards of finished silk goods and 86,00,000 yards of mixed silk goods are imported every year. Benares imports raw silk and thrown yarn from Japan for use in its local manufacturing industry. A large market for raw silk is available both in India and outside. In order to cater successfully for this market, raw silk of uniform quality and high grade must be produced in bulk.

Bengal had a raw silk industry in the past and used to export raw silk in large quantities in the sixties of the last century. As a matter of fact, Bengal silk was the first to enter the world's market through the efforts of the East India Company, but it has lost ground completely for want of standardisation and organisation and Japan now holds the field as the chief producer and supplier of raw silk to the world's markets.

Silk fabrics must also be standardised in order to be acceptable in the world market. In India, weaving of silk fabrics is mostly done on handlooms and Saris, Dhoties, Chaddars, Gown pieces, Shirting and Coating cloth are some of the principal products. Japan has captured the market by standardising its products and supplying the goods in bulk strictly in accordance with the specifications. This is secured by means of compulsory examination and certification of all exports in the government cloth conditioning houses.

Other important factors contributing to success or failure in the competitive markets of the world.

(1) *Races of Worms :*—Countries which rear univoltine worms have an advantage over those which rear multivoltine ones in that the univoltine cocoons are better than the multivoltine ones in respect of their silk content and the length of

the reelable filament. Multivoltine cocoons of India have about 1 to 1½ grains of silk and yield a filament measuring 200 to 350 yards in length. In contrast to these, the univoltine cocoons generally have about 3 grains or more of silk and yield a filament about 800 to 1000 yards long. On the other hand, while univoltine cocoons are produced once a year, multivoltine ones are obtainable four to seven times in the year. Science has, however, circumvented these disadvantages. Thus, by means of the application of cold and the use of chemicals, Japan actually makes the eggs of univoltine worms hatch three times in the year and rears crops of cocoons in spring, summer and autumn. Through hybridisation between uni-and multivoltine races, selection and fixation, multivoltine hybrid worms have been evolved which yield cocoons of a better quality than those produced by the parent stocks. In Bengal two such hybrid races raised by one of the authors (C.C.G.) are, at present, producing cocoons with 2 to 3 grains of silk content, and 500 to 750 yards of filament according to the season. Further improvement seems possible through the infusion of fresh univoltine blood. In Mysore also the first crosses between univoltine and the local multivoltine races are yielding better results than the indigenous races. Japan employs the first crosses between two univoltine races to increase the yield of silk in the cocoon. It goes without saying that the cocoons with larger silk content and longer filament are easier to reel and yield better quality raw silk.

(2) *Mulberry* :—Countries rearing univoltine silkworms have another advantage in that they can and do make use of leaves of grown up mulberry trees to feed the worms. These leaves have a high food value for the worm. But countries which rear multivoltine worms grow bush mulberry as a field crop from cuttings, thereby harvesting several crops of leaves in a year to feed the several cycles of the worm. Leaves of the bush mulberry are, however, inferior in quality, and may have something to do with the inferior yield of the multivoltine cocoons and the inferior resistance to diseases. Once again Science helped Japan to select out varieties suitable for its different localities out of the four hundred varieties of silk-worms found in that country and to evolve a technique of growing bush mulberry as miniature trees from grafts, thereby obtaining leave from mature stems to rear three cycles of worms in the year. This method when introduced in Bengal has yielded "high type of bush mulberry" whose leaves are better than those obtained from the old type of bushes raised from cuttings.

As mulberry accounts for about two-thirds of the cost of cocoon production, it is essential to reduce the cost of leaves in these days of competition and to this end trees are the most economical, requiring little attention and maintainance after they once become established in about four to eight years. Trees grown from cuttings perish within fifteen years and those from seeds take a long time to grow, while those from grafts grow quicker and last for 50 to 100 years. There is ample scope for research on mulberry in India.

(3) *Seed production* :—The pebrine disease of worms caused by the attack of an internal protozoan parasite (*Nosema bombycis*) is both heriditary and contagious and kills off the worms. It practically wiped out the industry in Europe in the middle of the last century, and caused havoc in other countries also. Pasteur found out a method of eliminating it by the microscopic examination of the body tissues of mother moths and rejecting the eggs of those showing pebrine corpuscles in their body. This is now a routine practice in sericulture and when properly done keeps the disease under sufficient check. Precautions should also be taken against infection through contagion. Private persons are prohibited by law in Japan to deal in eggs and all eggs are required to be passed by Government examiners. Other countries though not enforcing such strict laws take steps to see that rearers get disease-free eggs.

The other diseases from which silkworms suffer are flacherie (comparable to diarrhoea and Cholera) and grasserie (comparable to jaundice in human beings). These diseases depend upon food, climate and ventilation. Good food enables the worm to resist these diseases as well as pebrine to a very great extent. Muscardine is caused by a fungus which generally proves fatal but is controllable by means of disinfectants. The parasitic fly *Tricoliga bombycis*, causes great loss and is a serious danger in Bengal where it has to be kept off with the help of screens and wiregauge in the doors and windows of the rearing house.

(4) *Reeling* :—The maintenance of large reeling factories fitted with up-to-date machines and following up-to-date methods of reeling so as to produce standard grades of raw silk of uniform quality in bulk is essential in the best interest of the industry. Reeling factories from the pivot of the silk industry consuming the cocoons and producing raw silk for the manufacturing industries. It is on an efficient reeling industry that the success of sericulture depends because in the absence of buyers cocoons production has to be stopped.

(5) *Conditioning House* :—An efficient Conditioning House is an essential requirement of raw silk industry. It helps the reelers to produce standardised raw silk and furthers the export trade in raw silk by ensuring that raw silk of proper grade shall alone reach the buyer's hands. Japan's big export trade in raw silk is possible only on account of the effective checking done by the Conditioning House at Yokohama. She has another Conditioning House at Kobe for exportable raw silk and several such houses in her silk weaving districts where large quantities of raw silk are consumed in the manufacture of various articles of commerce. In India the only Conditioning House at present in existence is the one at Howrah started at the suggestion of one of the authors (C.C.G.) by the Bengal Government in 1938.

(6) *State help* :—Since cocoon production is carried on by the poor peasants and weaving is also done by equally poor weavers, the industry is in the hands of such people as are hardly competent to reorganise the industry on a scientific or co-operative basis. State aid is, therefore, urgently called for if the industry is to be resuscitated and rescued from extinction. Only about a decade ago, this industry contributed about 40 per cent of the total national revenue of Japan. This was the outcome of extensive researches in every aspect of the industry in the district stations, central research stations, and the universities ; dissimination of sericulturale ducation in special colleges and schools, organisations for the supply of disease free 'seeds', study of the world's markets and enactment of laws to regulate trading in this commodity. The Government of Japan spares no pains or expense to keep this industry in perfect trim because it knows that no other industry helps the rural population so much as this.

The spun silk industry :

The spun silk industry utilises the waste products of the silk industry and constitutes an important subsidiary industry by itself. The floss removed from cocoons ; cut, damaged and otherwise unreelable cocoons ; unreelable outer and inner portions of cocoons rejected as waste in reeling and throwsters waste obtained in the process of throwing raw silk into yarn were formerly looked upon as waste until the invention of the waste-silk spinning mill in the middle of the last century. Spun silk is now asimportant a fibre as the reeled silk. The only spun silk mill present in India is the one set up by the Mysore State at a cost of ten lacs of rupees. In Bengal cut and unreelable cocoons are spun with the hand spindle (Taku) into a course yarn, known as *Matka*, by women of poor families in the midst of their

house-hold duties earning a small income from it. Nearly 15000 women are known to be engaged in this occupation.

The present raw silk industry of India.

This industry exists, on an appreciable scale, in Mysore together with the adjacent Taluk of Kollegal in Madras, Bengal and Kashmir including Jammu. The industry is best organised in Kashmir and Jammu at the present time. It is managed and worked by the State whose Sericultural Department looks after the mulberry plantations. The State Department produces univoltine eggs under modern hygienic conditions and also imports such eggs from Europe, hibernates them distributes them free of charge to the rearers, looks after the incubation of the eggs in the rearers' houses, supervises rearing, allows the rearers to obtain leaves from state—owned mulberry trees free of charge, receives the cocoons from rearers who are paid for their labour, treats and reels the cocoons in large well-equipped factories and sells the raw silk and waste products. Kashmir, at present, produces the best raw silk in India. But absence of a Conditioning House is a great handicap and with such a House the quality of its raw silk could be improved. Owing to this defect, it lost the European market in competition with the Japanese raw silk. The production of raw silk in Kashmir and Jammu amounts to about 200,000 lbs. a year.

The glory of Bengal's industry both in raw silk and silk fabrics belong to the past. With the closing down of the European reeling factories, which was due to the poor quality of the produce =, the sericultural operations in Bengal contracted to a ridiculous low level. No attempt was made to rescue the industry by means of research and experimentation. The severe depression of 1929 caused precipitous fall in the price of raw silk and occasioned the collapse of the few Indian reeling concerns which existed and this led to further deterioration in the situation. Mulberry acreage contracted, within this short period, from 18000 acres to about 9000 acres in 1939, which marked the lowest ebb in Bengal's industry. Since 1937, however, serious efforts have been made, principally at the suggestion of one of the authors (C. C. G.) to resuscitate the industry and to rear it upon a scientific and well-planned footing. As indicated above, hybrid races of worms have been introduced, better methods of cultivating mullberry have been adopted, mulberry grafts have been distributed free of cost together with grant of bonus, efficient reeling machines have been evolved which are being manufactured locally and are suited both for small scale domestic concerns as well as for large scale power reeling facto-

ries and a raw silk Conditioning House, the first of its kind in India, has been established. As a result of these efforts a large demand for raw silk has arisen both from the Indian provinces and places outside India. Research work aiming at the improvement of mulberry and of cocoons is in progress and a Sericultural Research and Training Institute is proposed to be started soon in Bengal. The prospects of Bengal's industry are brightening.

Mysore is the largest centure of raw silk industry in India at the present time, but here too very little of organised reeling is done. Before the onset of the depression, the area under mulberry was about 53000 acres but now it is 25000 acres only. Recently the State, has granted same concessions and has shared 10 % of the capital invested in the large reeling factories started there recently. Mysore's sericultural department has already brought about improvements by attaching a premium to cocoons obtained from the first crosses and by establishing grainages for the production and supply of disease-free seeds. The present production of raw silk in Mysor3 is estimated at about 800,000 lbs. per annum. Mysore Government grants bonuses to those who establish mulberry trees, from grown-up seedlings supplied by the department free of charge. The prospects of Mysore's industry also are brightening.

The Madras sericultural department is following in the wake of Mysore. About 150,000 lbs. of raw silk is produced annually.

Assam has a small sericultural industry but is in an unorganised domestic state. Attempts are being made to develop it. The Punjab has developed as small sericultural industry recently with univoltine worms. Behar, Central Provinces, Bombay, Baroda, Gwalior and Rajputana States are trying to establish sericulture. With the unexpected rise in the price of raw silk due to war feverish attempts are being made by rearers everywhere to increase the mulberry area. Appreciable increase in the total production of rawsilk may be expected within a short period.

The foregoing pages indicates briefly the state of affairs in regard to Sericulture and the rawsilk industry in the Provinces and in the Native States. The Government of India set up two Tariff Boards in 1933 and 1938 and their reports contain a great deal of valuable information about this industry. As a result of their recommendation, tariff protection, though not adequate was, granted against unfair Chinese and Japanese competition and an Imperial Sericul-

tural Committee has been set up which meets annually as an adjunct of the Industries Conference and makes allotments to the various provinces and States out of a grant of a lakh of rupees made annually by the Government of India for effecting impro- in sericulture. An All-India Sericultural Conference of experts vement and workers engaged in sericulture was started in 1939 at the suggestion of one of the authors (C.C.G.) and meets annually now to transact business.

As regards other kinds of silks, attempts are being made to develop eri and muga silk industry in Assam, eri and tasar in Behar and tasar in C.P. Madras and Bombay Provinces are also making an effort to establish eri silk industry within their domain. Bengal's attempts at developing eri silk as a cottage industry in its eastern districts has given very encouraging results and this problem is likely to receive greater attention at the hands of the officers and workers in the near future.

Almost every Province or State has a silk-weaving industry carried on hand looms, the produce of which is mostly consumed locally. More than half of the raw silk used in these weaving industries is imported from outside. In order to meet the local demand, the indigenous raw silk needs to be improved in quality by means of improved methods of semi-reeling on co-mmercial basis. When the consumer will be assured of a steady supply of standardised grade of raw silk free from faults, the demand for it from home industries as well as from the exporting agencies is bound to appreciate in course of time. The suggestions made in the foregoing pages are destined to achieve this purpose.

The future of the industry:

The future of silk is assured and there need not be any apprehension in regard to it. Now that it is required for making parachutes, silk comes to be included in the category of vital necessaries in the life of a nation and India happens to be the only silk-producing country within the British Empire.

The lower hills and submontane regions along the Hima-layas from the North-western Frontier Province to Assam fur-nish us with innumerable suitable localities where rearing of univoltine cocoons can be carried on with ease and advantage. A large number of stations in plains of India can become rearing centres of multivoltine cocoons for at least six months in the year.

Rajadharma : by Prof. K. V. RANGASWAMI AIYANGAR, Hon. University Professor of Economics, Benares Hindu University ; published by the Adyar Library, 1941 ; pp. xxv, 236 ; price Rs. 3/8/-.

The book consists of two lectures delivered at the Madras University by the author in 1938 as Dewan Bahadur K. Krishnaswami Rao Lecturer, and of the notes subsequently added to them at the time of their publication. The lectures cover only 65 pages, while the notes extend over more than 150 pages printed in a smaller type. To the serious student of Ancient Indian Culture, the latter would appear to be even more important than the lectures themselves. Some of them are no doubt of the nature of mere references ; but most of them are nothing less than small essays, where the author seeks to establish his viewpoints with the help of a number of original texts quoted and discussed. Prof. Aiyangar is a scholar of wide reading and deep thinking ; it was really very good of him to have placed at the reader's disposal interesting bits of information and valuable discussions in the form of these notes, which it would have been utterly impossible to incorporate in the two lectures without making them unwieldy or destroying their thread of narrative. How many people, for instance, know that Mādhava has written a commentary of several hundred pages dealing with civil and criminal law, while professing to comment upon only three words in the *Parāśarasmriti*, '*rājā dharmeṇa pālayet*'? How many are aware that the coronation ceremony of Shivāji as carried out by Gāgābhaṭṭa and described by Chiṭnis in his *Bakhara*, follows closely the procedure laid down in a contemporary work, the *Rājadharmaprakāśa* of Mitramiśra? The reader of the notes will get many such important and interesting bits of information. They also contain discussions of important topics, among which the following may be mentioned :—the nature of Dharma, the mixture of penance and punishment, the immunities granted to Brahmanas, the nature of Arthaśāstra and Dharmaśāstra, the relative importance of sacred law and customs, *Rājā kālasya kāranam*, is the king above the law? the adjustment of Dharma to the changing society, the king's power to make laws, the nature of Asoka's Dhamma, the aspects of barbarians' rule in ancient India, problems connected with women's proprietary rights, indissolubility of marriage, divorce, *Niyoga*, *Satī*, widow remarriage, inter-caste marriage, treatment of abducted women, etc.

The reader may well wonder how a book dealing with such and similar topics can be described as Rājadharma. The term has been usually used in the later Dharmaśāstra literature to denote works dealing with the duties of the king and his functions connected with the administration and civil and criminal law. The learned author maintains that this is an unjustifiable restriction of the original meaning of the term. He points out that the Indian king was as much responsible for the correct conduct of his subjects (*āchāra*) and their performing the prescribed penances (*prāyaśchitta*) as for conducting the government and administering civil and criminal law. The Rājadharma, with which he had to be familiar, had naturally to be coextensive with the entire Dharmaśāstra, which dealt with all aspects of life, individual and corporate, private and public. Good government therefore required a knowledge of the whole Dharma and not only of Rājadharma in its narrower sense. It has to be admitted that one of the earlist authorities on the subject, viz, the *Mahābhārata*, uses the term in this wider sense; so also does one of the late writers, Lakshmīdhara, whose *Kalpataru*, Prof. Aiyangar is at present editing. The vast majority of the Smṛitis, however, use the term Rājadharma not in the wider sense of Prof. Aiyangar, but in the narrower sense usually accepted.

The reader of the present lectures often finds himself in a position similar to that of the guest of a busy host, who can snatch only a few moments to show his extensive gardens to the new comer. While showing him one bed, he suddenly thinks of another, and drags his guest to it before he had fully explained what he wanted to say about the bed left behind. The guest does not enjoy the quiet pleasure of seeing the garden in its proper sequence and full beauty. The same feeling will overcome the reader of the present lectures. He finds that the learned author is very often taking up new topics without having properly finished those already in hand. We shall give one instance here. At p. 21, the author takes for consideration the doctrine that the king and the Brahmana uphold the world-order. But after taking up this topic, he is naturally reminded of the oft-accepted view that sacred texts were often tampered with in the interest of Brahmanism, and proceeds to disprove it. The old topic fades away; we can see the author's views about it only at p. 46. The guest cannot blame his busy host for hurriedly showing him the garden; he can only hope that his host may find more leisure sometime later to show the whole garden in a connected manner. The reader also can only hope that Prof. Aiyangar will give us something more

comprehensive than these two lectures, where his valuable views would be more fully expounded by him.

Ancient Indian Culture presents several controversial problems and it is not possible always to agree with views expressed even by great authorities like the present author. The reviewer differs from the author in holding that the king in Ancient India did possess legislative power in practice, that he could grant reprieve, that Asoka's *dhamma* regulations did interfere with the performance of Vedic sacrifices, etc. In a review it is not possible to enter into these controversies. It may however be pointed out that the view that the Junagad inscription and Bāṇa refer to the coronation oath of king Rudradāman and Bṛihadratha Maurya respectively, which was propounded by the late Dr. Jayaswal and seems to have been accepted by Prof. Aiyangar, is untenable. The Junagad inscription refers to Rudradāman's oath not to kill anybody except on the battle field, cf. आप्राणोच्छ्वासात् पुरुषवधनिवृत्तिकृतसत्यप्रतिज्ञेन संअन्यत्र ग्रामेषु । ; Bāna describes Brihadratha Maurya not as *pratijñā-durbala* 'weak in keeping a vow', but as *prajñādurbala,* 'weak in understanding.' The context will show that even if a manuscript gave *pratijna durbala* as the reading of the expressoin, it will have to be rejected.

A few such differences of view are inevitable We have however no hesitation in pronouncing the work as a very valuable contribution to the study of Rājadharma and Dharmaśāstra. We hope that it will soon be followed by a more comprehensive work.

A. S. ALTEKAR.

Prāchya-Vargīkarana-Paddhati—a system of classification developed on Oriental lines. By Satisa C. GUHA, with Introductory Note by MM. Acharya Gopinath KAVIRAJ. Granthagosthi, Gāndhigram, Benares, 1932. R. 2/8/-.

Guha's "Prachya-Vargikarana-Paddhati" is already one of the most suitable and recognised schemes of classification for Samskrit books.

In 1937 when I was engaged in the reorganization work of the Samskrit section of the Karachi Central Library I consulted half a dozen schemes of classification but at the end I found that Mr. Guha's scheme was best suited for the said collection. An Oriental scholar of repute, Prof. Mankad of the D. J. Sind College, agreed with me and with his help we classified the rare collection of Saṁskrit books of the said Library. The scheme

was found more suitable because it did not affect much the Dewey scheme we had followed in the main Library.

It was to my astonishment, when I had a chance to see Mr. Guha for the first time in June 1940 at Allahabad, that a tiny and unimposing man like him was the author of the scheme I had followed three years back at Karachi.

I know Mr. Guha is always aspiring for original work in the field of library science, but it is unfortunate to find him always in odd circumstances. In spite of all adversities he takes courage to say : एकला चलो..Go by thyself.

B. K. TRIVEDI

29-4-41.

Elements of Hindu Culture and Sanskrit Civilization by Dr. P. K. ACHARYA, I.E.S., Pp. 184. Price Rs. 1/8/-. Published by Messrs Mehar Chand Lachhman Das, Sanskrit Book Depot, Jain Street, Saidmithabazar, Lahore.

Dr. P. K. ACHARYA's Hand-book has fulfilled a long-felt desideratum. Within a short compass of one hundred and eightyfour pages he has surveyed, in broad outlines, the entire landscape of Hindu Culture and Civilization. Specially he has laid under debt, 'the modern students, competitors in Service examinations, legislators, debators and others' for whom the book is intended (Intro. p. vii). The author does not claim any originality or thoroughness, and the work is more or less a compilation. Still it can be used, with profit, by public in general and by students in particular for a ready reference to the original sources of Hindu Culture.

The present book is divided into four sections :—I Family Life, II Social Life, III Political Life, IV Moral and Spiritual Life. In each section the writer starts with a general introduction to the topic and then deals summarily with the different aspects of the aforesaid phases of Hindu Culture and Civilization. The presentation of the subject is quite clear, but the organic arrangement of various sub-topics is not balanced and proportionate. Consequently, the book lacks in the artistic grace of execution and finish. The book also suffers from some other blemishes. For the second edition the following suggestions may be utilized and the mistakes of commissions, omissions and opinions corrected :—

(1) The title of the book is not apt. The word 'Sanskrit' is superfluous, as the author has used not only the Sanskrit sources but he has also ransacked the Pali and Prakrit sources

and has dealt with Buddhism and Jainism—two main offshoots of the original stream of Hindu Culture.

(2) The book requires a better arrangement of topics. The first two sections have misappropriated the Aesthetic Life of the people represented in Art and Literature. This deserves an independent treatment in a separate chapter. *Varṇa* and caste figure under Family Life, but their proper place should be in Social Life. The bases of law, which are tied to Moral and Spiritual Life, should go with Judicial Administration under Political Life. Hindu Ethics, which has been unfortunately omitted, should be given a breathing space under Moral Life.

(3) The following require correction :—On page 8 मानुष and प्राजापत्य forms of marriage are equated. As a matter of fact मानुष is a synonym of आसुर. The आसुर form does not imply, as the author thinks (p. 9), an elopement and subsequent settlement of the anger of brides' guardian. Rather, it indicates the transfer of property vested in the girl in lieu of money.

There is a confusion between चूडाकर्म and कर्णवेध (p. 11). These are two independent संस्कार's and the latter precedes उपनयन. Equation between चतुर्थी कर्म and गर्भाधान is again wrong (p. 12). The former is a post-marital ceremony but independent of गर्भाधान. उञ्छवृत्ति is not beggary (p. 36) but gleaning grains after the crops are removed from the field. The word आर्य is not derived from the root कृष् 'to cultivate' (p. 92) but from the root ऋ 'to move'. While enumerating the seven constituents of the state one is mentioned as Force (p. 138). It should be Forts दुर्ग, as Army or Force बल is mentioned separately.

(4) The following omissions also we noticed :—The विवाह संस्कार has been dismissed summarily, while minor संस्कार's are described in detail. गोदान has been altogether ignored. The history of social evolution has been divided into three stages—Primitive, Mediaeval and Modern. It leaves the impression on the mind of the reader that the ancient culture of India was primitive. There should be an Ancient Stage also distinguished from primitive. In dealing with Indian Literature the whole Sanskrit literature has been disposed of in four or five lines (p. 111). Its treatment is quite inadequate and disproportionate when compared with Pali & Prakrit literatures. In detailing the sources of Hindu Law only the first three श्रुति, स्मृति & सदाचार are mentioned (p. 147). The fourth स्वस्य च प्रियमात्मनः and other additional ones are ignored. Under philosophy no sketch of the sublime philosophy of the

Upanishads is given and no reference is made to the Jain and Buddhist systems. "Sarvadarśhana Saṁgraha" might have been useful to the author.

(4) As regards views and opinions very few have been expressed independently. About the evolution of the caste system in India, the old hackneyed and exploded views have been repeataed (pp.41-43) and it has been confused with the Varṇa system. Now it has been proved to the hilt that this outworn system was not concocted by the cunning Brahmans and superimposed on the dumb millions of India. It is a primitive institution based on regions, race, occupations, superstitions, customs, mutual factions and exclusive superiority complex. The Aryans themselves were victimized by it when they mixed with the pre-Aryans in this country.

R. B. P.

Visvabharati Quarterly—'Tagore Birthday Number' May-October 1941. Rs. 5/-. Santiniketan, Bengal.

The *Tagore Birthday Number* of the *Visvabharati Quarterly* is a double-number, being parts 1 & 2 comprising the months May to October, 1941) of volume 7. It is a profusely illustrated volume of 250 pages of royal octavo besides the plates numbering 25, and is priced at Rs. 5/-. It is full of original writings on the great poet, contributed on his eightieth birthday by great admirers, very reverently appreciating the various aspects of his creative mind and genius. Among the contributors are foreign admirers like TAI CHI-TAO, CHEN LI-FU, LIN SHEN, James H. COUSINS, Stella KRAMRISCH, Henry BIDOU, Ezra POUND and Evelyn UNDERHILL, and the Indian ones like Ramananda CHATTERJEE, Hirendranath DATTA, Dhurjati MUKHERJEE, Indira Devi CHAUDHURI, S. K. MAITRA, Annadhsankar RAY, Amiya CHAKRAVARTY, Radhakamal MUKHERJEE, Buddhadeva BOSE, P. GUHA-THAKURTA, Pramatha CHAUDHURI, S. K. BANERJEE, Diwan Chand SHARMA, Nolinikanta GUPTA, Humayun KABIR, Prabodhchandra SEN, Vidhusekhara BHATTACHARYA, K. R. Srinivasa IYENGAR, Sachin SEN, S. N. DAS GUPTA, Gurdial MALLIK, and Kshitimohan SEN, Besides giving an interesting Foreword of four pages, the editor Sri K. R. KRIPALANI has written on the Poet as Educationist.

The Bibliography of the Poet's Bengali and English writings compiled by Sri Prabhat Kumar MUKHERJEE, Librarian and Lecturer at the Visvabharati, is given in chronological order. This is followed by an exhaustive list of Tagore's contributions to the *Visvabharati Quarterly* (1923-1941) and to the *Modern*

Review (1910-1941). Last of all is given a list of works on the Poet in Bengali, Hindi, English, Hungarian, German, Dutch, Portuguese, French, Italian and Chinese.

It is no wonder that such a rich volume should go out of stock within a few days of the celebrations of the 80th birthday of the Poet. In these days of scarcity of paper we do not know if the editor would contemplate a reprint which seems to be worth undertaking. Unfortunate as we are the Poet left his mortal frame on August 7, 1941, leaving the whole world to mourn his loss. The Editor has since then published Part 3 of the volume.

S. G.

Tagore Memorial Special Supplement of the Calcutta Municipal Gazette, September 13, 1941 ; edited by Mr. Amal HOME ; Price Re. 1/-.

It is an admirable publication giving all useful information about the poet. The present issue has surpassed the previous "Tagore Birthday Supplement" (May 17, 1941) of the same journal having incorporated into it most of the important contents of that issue, such as the illustrated "Chronicle of Eighty Years", the "Tagore Genealogy" and the like, all of which have been properly revised, enlarged and brought up-to-date. The Chronology of the poet's works, both in Bengali and in English, with translations into the various languages of the world, is the most complete thing we have ever had. Besides numerous fine illustrations, including facsimiles of the Poet's writings. The Memorial Supplement also contains tributes from men like the Most Rev. Foss WESTCOAT (the Bishop of Calcutta), Dr. Amiya CHAKRAVARTI, Buddhadeva BOSE, Nirmal Kumar SIDDHANTA, Satyavrata MUKHERJEA, Kalidas NAG, Shahid SUHRAWARDY, Nihar Ranjan RAY, St. Nihal SINGH, Kalinath RAY, Abany C. BANERJI, Nikhil CHAKRAVARTTY, the Vice-Chancellor, Sir Muhammad Azizul HAQUE, and Pandit Jawaharlal NEHRU, writing from the prison.

All credit for this publication goes to its very able editor, Mr. Amal HOME, who has shewn his special talent and aptitude for special numbers. The Health Numbers of *The Calcutta Municipal Gazette* are of outstanding merit. The Gazette itself—a weekly publication offered at Rs. 3/- a year—is an object lesson to all Municipal Corporations of the country. The Tagore Memorial Supplement, priced at Re.1/-, has probably surpassed all the special issues of any journals we have hitherto seen on the great poet after his death.

University of Ceylon—its power and purpose. By Kewal MOTWANI, A.M., Ph.D., Adyar, Madras, 1941.

This pamphlet of 51 pages gives the revised and enlarged form of the lecture delivered by the author under the auspices of the Rotary Club, Colombo, in September 18, 1941, at the Grand Oriental Hotel under the presidency of Mr. Hubert E. NEWNHAM, M.A., C.M.G., V.A., Member of the State Council. The author's life is one of academic rovership, visiting and lecturing in various Universities in different parts of the world, having observed at close quarters the working of more than sixty institutions. He is therefore quite in a good position to speak on the subject which is being talked of so much to-day. The buildings are going up and the University Bill is soon to be placed before the State Council.

The learned lecturer has hinted upon many an important phase of University education in general and that in the east in particular. The inseparable bond of Ceylon with India has been stressed, says he: "Ceylon has drawn inspiration from India for ages, and her salvation lies with that of India. It would be a far better plan to share in India's spiritual and intellectual effulgence of yesterday, and no less of to-day, than to keep harping on those mutually exclusive interests that seem to divide the two for the moment. India has to-day some of the greatest minds of the age and for all times to come. Ceylon could own them as her own and take full advantage of their contributions to the fields of science, philosophy, politics, religion, etc."

As regards medium of instruction in the University, Dr. MOTWANI has strongly advocated the claims of English: "I am opposed to instruction in the vernacular at the University level." Elucidating this he continues: "The medium of instruction at the primary stage should be the mother-tongue; at the secondary stage it should be a combination of the mother-tongue and English, while at the University level it should be purely English." The learned lecturer seems to have ignored the claims of the mother-tongue advocated by the master minds of the day, including those of India to-day.

S. G.

FOUNDATION-STONE LAYING OF 'HOLKAR HOUSE'

[Sir S. Radhakrishnan, in laying the foundation stone of the Holkar International House on Sunday, 30-11-1941, in the presence of His Highness Maharajadhiraja Raj Rajeshwar Sawai Shree Yeshwant Rao Holkar Bahadur, G. C. I. E., Maharaja of Indore, and Professors of the University, Members of the Council and the Senate, delivered the following speech.]

Your Highness, Ladies and Gentlemen: Let me at the outset express to His Highness the Maharaja of Indore our most cordial welcome to this University. By this magnificent grant of Rs. 24,000/- per annum in perpetuity (loud cheers) he has increased the indebtedness of this University to the Indore Durbar, which has already given us as early as 1912, a sum of five lacs of rupees. I recall with pleasure that His Highness was a member of Christ Church in the University of Oxford and this evening we will have the pleasure of welcoming him to the fellowship of the Benares Hindu University. (Loud cheers). My friend Sir Tej Bahadur who is on the platform to-day is an honorary graduate of both Oxford and Benares the two Universities with which I happen to be intimately connected at the moment. Oxford represents to most of the Western scholars, the cultural capital of the western world, and has for some centuries attracted eminent scholars from all parts of Europe. Benares for a much longer time has attracted pilgrims from all parts of the East. The meeting of the two famous Universities in the person of our generous donor is an indication of the future meeting of the East and the West (loud cheers) with which the hope of the future is bound up. He has given this donation for the purpose of developing international fellowship and understanding.

You will all agree with me when I say that at the present moment if the world finds itself in this unfortunate condition, it is due to the lack of international understanding. The world has grown physically one. In an aeroplane you can go over it in a week's time. It is also becoming economically interdependent. The political fortunes of the different nations have bearings on each other, and fashions of thought, and modes of Art, are cutting across national frontiers. In spite of this growing physical and intellectual unity, we are having a sharpening of national antagonisms. Closer physical approxi-amation, greater spiritual disunion, these are the characteristics of the world to-day.

And if we are to remedy these defects, we should look to the Universities. Politicians and statesmen try to bring about external reconstruction by political re-arrangements and economic remodellings, but they have all proved abortive they have turned out failures, because the spirit that is essential to make them successful is not there. The temper of the mind, which alone can make international unity a success is not to be found among statesmen. The last war was fought for the noble purpose of ending all wars, and for making the world safe for democracy; we had world economic conference, the disarmament conference and the League of Nations. Why have they turned out such dismal failures? Why are we having another war on our hands to-day? Why have the hopes of the young men who fought in the last war been betrayed and adshed to the ground?

It is because the spirit of the world community, for which the world desires and craves has not been achieved. In a world which is growing more into a physical whole, we have a set of 60 and odd independent sovereign states. That is the primary cause for international anarchy and confusion. This war is being fought again, and we are told that it is a war between Democracy and Dictatorship. I should like to pause here for a moment. What do we mean exactly by Democracy and Dictatorship? Dictatorship means the exaltation of the Nation-state and the sacrifice of the individual's soul and mind. Democracy on the other hand means the supremacy or the primacy of the human individual and the recognition that the state is but a means for the protection of the human personality. It does not mean that we are all equal either physically, mentally, or even morally. But we are equal in an essential sense. Every individual has a right to live in this world and aspire to the ardour and dignity of his life. The world has its focus in the individual. Love is experienced by the individual. Truth is revealed to the individual. Every individual would like to live his own life, and share his own responsibilities. There are everywhere so many aspects in which we are one with the others. But in those most intimate personal aspects of our life we are alone. When we cross a point, even the dearest of friends are strangers to one another. Each one has his own joy and sorrow, shudders and ecstasies. This invisible life which is not externalised or objectified is the personal side of every human being. To assist every individual to realise this is the aim of the State. It is the privilege of the human individual to be eccentric, to be un-orthodox, to be non-conformist. Democracy means that the state recognises the dignity of the individual, irrespective of class, race or nation. Dictatorship

exalts the State, and democracy the individual. If the world is to be built up into a human community, this essential principle of democracy—the right of the individual to live his own life—requires to be recognised. The value of the state is judged not by its material wealth or the size of its armaments or the extent of its roads and railways but by the measure to which it contributes to the happiness of the human individuals who compose it. This happiness is independent of the rise and fall of dynasties, or the waxing and waning of States.

Thucydides contemplates the image of a world in which Athens would have ceased to exist. Polybius shows us the conqueror of Carthage meditating over the burning town "And Rome too shall meet her fateful hour." King Janaka said when Mithila burns nothing that is mine is burnt.

In a University, it is our duty to emphasise these supreme values of the spirit. There is a superiority of the individual over the merely external and the objective. For this freedom must be granted. If this principle is not accepted I do not suppose that it is possible for us to build a human community in this world. To develop the right psychology, to impart the true vision, is the function of Universities.

For achieving that object no higher way could be devised, than that which our University has now proposed with the full approval of His Highness, that is to invite every year an eminent scholar or savant, and to ask him to spend about four or five months in the holy city of Benares, and send also three of our best young men, one in Arts, one in Science, and a third in Technology to foreign countries for further training. (cheers). These are the steps which the University has adopted for the purpose of implementing the noble desire of our illustrious donor when he made this donation. The first year's contribution is earmarked for the purpose of building a suitable residence for the visiting Professors. We requested His Highness to lay the foundation stone, but with characteristic modesty he has excused himself. Our venerable Rector should have done it, but for the fact that he is unable to stand the physical strain in the early hours of the morning. So it is my pleasure to-day to lay the foundation stone of this "Holkar House" which is to be built in this University. And my prayer is that it may be there for a long long time to house the eminent scholars who will visit this University and continue to remind us of the ardent patriotism, abiding love of learning, and essential humanism of our illustrious donor. (Loud and prolonged cheers)

CONVOCATION ADDRESS OF SIR TEJ BAHADUR SAPRU

(*Delivered November 30, 1941*)

MR. VICE-CHANCELLOR, MEMBERS OF THE UNIVERSITY, GRADUATES, LADIES AND GENTLEMEN,

Let me at once say how deeply grateful I am to you for the honour you have done me by asking me to address you at this Convocation—an honour which I appreciate all the more because my association with this University has been only nominal and my services to it absolutely nil. I know you have been truly generous to me, for a few years ago you spontaneously conferred on me a degree which I feel I had done nothing to deserve. I also realise that in asking me to deliver this address you have shown a spirit of tolerance well worthy of a house of learning for no one is more conscious than I am of an inherent vice in me. I have been practically all my life a dissenter—a non-conformist—in the domain of religious and political orthodoxy—in short an intellectual individualist who has been suffered more than he had any right to expect.

After a frank confession like this, let me tell you that my non-conformity has not stood in the way of my appreciation of the noble ideals which have inspired the founders of this great institution and which are so earnestly cherished by them in their daily work—ideals which also actuate its teachers and which, I sincerely hope, are sedulously striven after by the thousands of young men who have been privileged to imbibe the spirit of the *Alma Mater* in the most formative part of their lives.

Of the founders of this University several have left the scene of their earthly activities. They, however, live in our memory. There are some whom we can never forget and to whom we can never pay our debt of gratitude. The great name of Mrs. Annie Besant, the founder of the Central Hindu College, which was the nucleus of this University, will occur to every one. Not a Hindu by birth, she became a Hindu by choice and summed up in her life all that is best in Hindu philosophy and Hindu thought, and became to many of us, even to those like me who never accepted her as a religious or spiritual guide, a beacon-light in the still and afterwards stormy waters of politics. Then, there comes back to my mind the figure of Sir Sunder Lal—a name honoured in law and in many other departments of life besides—but above all for his practical



Sir Tej Bahadur Sapru.

gifts, unbending rectitude, unquestionable personal integrity and unadvertised benevolence. Not many men of this generation know how more than 25 years ago he willingly placed his unrivalled talents at the disposal of this University, how he prepared the outlines of the legislation which now governs it, how he removed the suspicions which in those far-off days clouded the minds of those power at Delhi and Simla, how he conquered all opposition, how he piloted the Benares University Bill and thus made it possible for this University to be born. That is a name which I have always held in the highest veneration. I could easily multiply other names—names of generous benefactors from among Princes and commoners—but I refrain. But there is one name, the bearer of which is happily with us and that is a name which will always remain imperishable in the annals of this University. Bent with the weight of 80 years but possessed of a heart, which still beats in unison with every call of duty, and a head, that is constantly thinking of how best to promote the abiding interests of the country and particularly of this University—his fondest child—Pandit Madan Mohan Malaviya's presence in our midst must be a source of inspiration to every one of us. A living example of what faith in one's ideals can achieve, in him you can see that most rare of things—a well-proportioned combination of lofty idealism and practical realism so far as this University is concerned. I am sure I am voicing the sentiments of every one in this gathering and of the entire Hindu community when I say that it is our earnest wish and prayer that he may be spared to us and to this University for many years to come.

You will perhaps permit me now to say how difficult I find my task on this occasion to be. During the last several years my services have been requisitioned by several Universities to deliver convocation addresses. It may be that when a man has reached my years it is perhaps presumed that he must have an inexhaustible fund of platitudes. It is, however, forgotten that there is not much room for platitudes left in the make-up of a case-hardened lawyer who has daily to deal more with the seamy side of life than with the bright. I sometimes think that the time has come when Indian Universities should seriously think as to whether they could not dispense with ceremonial addresses on occasions of this character.

There is, as I have just said, a ceremonial side to our convocations, but as I view the whole matter, it seems to me that their serious side is of far greater consequence, for while on the one hand your alumni come to take leave of you after their

five years' stay under your fostering care and protection and you send them out declaring to the world that they have earned recognition at your hands, they enter the bigger University of the World after leaving your portals without knowing how the world is going to treat them. The bigger University of life, into which they are about to enter, has its own tests. I assume that you have endowed them with certain intellectual and moral gifts, that you have unfolded before them the meandering tale of humanity, its triumphs and failures, its appreciation, howsoever fragmentary, of truth, its failure to avoid error, its conquest of nature, its advancement in knowledge, science and civilization, and its relapses into savagery and barbarism. The young men, therefore, whom you are sending out to-day, deserve your best sympathy and support. At the same time you too are entitled to expect that the mental and moral equipment, with which you are launching them into the uncharted seas of life, may be their shield and protection against those perils which are awaiting them.

I am rather anxious to speak of those perils and speak of them with absolute candour. I have a very vivid recollection of my college days in the early nineties of the last century. The Calcutta University had been established in 1858, the Allahabad University had followed in 1887, and by the nineties of the last century the process of leavening up had been sufficiently long at work in Northern India. On the intellectual side the creed of many of us in those days was summed up in the famous lines of Tennyson:

> Not in vain the distance beacons. Forward, forward let us range.
> Let the great world spin for ever down the ringing grooves of change.
> Thro' the shadow of the globe we sweep into the younger day:
> Better fifty years of Europe than a cycle of Cathay.

We in these Provinces had cut ourselves adrift from our old moorings. Sanskrit learning, except perhaps in this holy city, was at its nadir and if ever we cared to know what our ancient forefathers thought or said on matters of human interest, we placed our hands on the bookshelves of a library to pick out the ponderous volumes of the orientalists of the West, the most popular among them being Max Muller. Occasionally the earnest among us satisfied our conscience and 'national' pride by acquainting ourselves with the writings of Dr. Bhandarkar and Dr. Rajendra Lal Mitter. We found some of them very pleasing, particularly so when they fed our pride as Hindus, and some of us took Max Muller far too seriously and imagined

to ourselves that the last word in human wisdom had been uttered by our forefathers. If that was the state of education in Sanskrit, Persian and Urdu were taught to us in the traditional style of the middle ages, but the poetry of the 'nightingale' and the 'rose' and the stories of love-lorn Lela and Majnoon, and Yusuf and Zulekha were beginning to be ousted by Shelley, Keats, Byron, Wordsworth and Tennyson. Ghalib had not come into his own and Iqbal's voice had not yet been heard. There were others whose emancipated intellect brushed aside all that black learning with a smile and assumed that our misguided ancestors lived more in a world, which was far too crowded with things of the spirit and too detached from the reality of matter. In short, we had the self-assurance of youth reinforced by a supreme ignorance of our past. The light that came from the West was far too dazzling for us. We knew something of or about the great scientists of the West, particularly those of England, scientists whose inventions or discoveries had led to the growth and development of industrial life of the West and given birth to that capitalism in the defence of which a part of the mad world and for the destruction of which another part of the same mad world are flying at each other's throat to-day. This science too, we realised, had given it mastery of the seas and established the political domination of the restless West over the stagnant and slumbering continents of Asia and Africa. Apart from the influence of scientists, which unsettled our minds so much in those far-off days, I can recall the all-pervading influence of Edmund Burke, and particularly of John Stuart Mill, John Morley and Herbert Spencer on our minds. John Stuart Mill's essays on Liberty, on the Freedom of Woman and Representative Government were our political Bibles. You could question them only at the risk of being accused by your contemporaries of unforgivable heresy. Describing the state of mind of the 'Eminent Victorians', who lived and moved in those days, of which John Morley was a type, Mr. Churchill says in his 'Great Contemporaries':

A varied but select society, observing in outward forms a strict, conventional morality, advanced its own culture, and was anxious to spread its amenities ever more widely through the nation. A sense of safety, a pride in the rapidly opening avenues of progress, a confidence that boundless blessings would reward political wisdom and civic virtue, was the accepted basis upon which the eminent Victorians lived and moved. Can we wonder? Every forward step was followed by swiftly reaped advantages: the wider the franchise, the more solid the State; the fewer the taxes, the more abundant the revenue: the freer the entry of goods into the island, the more numerous and richer were the markets gained abroad. To live soberly then, to walk demurely in the sunshine of fortune, to shun external adventures, to avoid entangling commitments, to enfore frugality upon Governments, to liberate the native genius of the country, to let wealth fructify in the pockets of the

people, to open a career broadly and freely to the talents of every class, these were the paths so clearly marked, so smooth, so easy of access, and it was wise and pleasant to tread them.

John Morley's serenity of mind and faith in the permanence of the state of society, which has been depicted in the above passage by Mr. Churchill, was rudely shaken by the 'entrance' of Great Britain into the world war though he had already failed to draw the right conclusions from the successful challenge which Japan, an Asiatic country, had for the first time thrown to Russia. Nevertheless it must be admitted that he was true to his convictions. The state of Victorian society and its mental make-up, which Mr. Churchill has painted, is perhaps not wholly true of England to-day, but the point to note is that although we in India lived 6,000 miles away from England, we accepted the ideals of Victorian society in England as unchangeable postulates. We hankered after them, and wondered at first that they could not be reproduced in India. Of course all this is true only of the intelligentsia of those days, that is to say, that section of the intelligentsia which had come under the spell of the West. The rest of the population knew nothing of these stirrings in the throbbing minds of the young men of those days. It worshipped its gods, as our ancestors had done before, it followed its customs and usages, it hated modernism in thought and conduct, and it reconciled itself to its fate whenever things went wrong with it.

While this was the state of our society, say 50 or 60 years ago, influences came into being simultaneously, which cannot and in my opinion should not, be ignored. If the Brahmo Samaj—earlier in date—made a limited appeal to the intellectual classes in Bengal, the Arya Samaj under the inspiring personality of Swami Dayanand made an appeal to a larger section of people in Northern India and certain other parts. I am not called upon to discuss its principles. It is enough for me to point out that being a protestant movement it threw a challenge to immobile orthodoxy and thus came into conflict with the conservative elements. It also came into conflict, as it was bound to, with certain proselytising creeds. Nevertheless its influence on the vast masses of Hindu society was deep and extensive. While on the one hand there were people who looked upon it not merely as a reformist body but as a body aiming at revolutionising certain cherished beliefs and practices, on the other hand there were others who denounced it as a revivalist body. In fairness to it, it must, however, be confessed even by those who were and have been critical of it from one point of view or the other, that its work in the social and educational

fields has been of immense value to the country. In any case it was the first organised movement which apart from its religious fervour aimed at social service. Simultaneously, or almost simultaneously with it, came into existence a new school of thought represented by the Theosophical Society, and I very well remember the time when those amongst us who thought that India was fast moving away from its ancient moorings, sought refuge in occultism and esoteric doctrines and worked as a brotherhood under the leadership of men and women born in the West, who were in revolt against the "materialism" of Europe and found a solace in the spiritualism of the East. It was, and has been, I think, primarily a movement of the in tellectual classes. Nevertheless it must be admitted even by its critics that its work also in social and educational fields has by no means been negligible. Indeed more positive language may be used and it may fairly be said that in a way it led to the establishment of this University and many other educational institutions in the country and to the revival of much of our forgotten culture. Other religious and social reformers sprang up. I shall not refer to them in detail but shall content myself by saying that no true historian of Hindu society can ignore or minimize the influence which Paramahamsa Ramakrishna, Swami Vivekananda or Swami Ram Tirtha produced on subsequent developments.

In short in the spiritual and intellectual spheres of life there were half a century ago or more two influences at work : one obviously western in its origin and the other equally obviously eastern. While this was happening a new movement, professedly political, also came into birth and that was the Indian National Congress, but here again let me point out to you, what is apt to be forgotten by men of this generation, that the real father of this movement was an Englishman—Allan Octavius Hume, a member of the Indian Civil Service—and in this I shall be borne out by one of the few survivors from among his first apostles—I refer to Pandit Madan Mohan Malaviya. It attracted to itself from the very beginning a large and growing number of the intellectual and professional classes, men who had drunk deep of the political wisdom of Edmund Burke, Thomas Babbington Macaulay, John Bright, John Stuart Mill, John Morley and William Ewart Gladstone. Among the early fathers of the National Congress you will find many English names, now almost forgotten by the present generation but still revered by men of my generation. They were the first pioneers of that love of freedom which is now the common heritage of us all, but in those days the Congress spoke with bated breath. It asked for and it appealed for the gradual

introduction and development of representative institutions, the establishment of simultaneous examinations for the Imperial services in India, the larger association of Indians with Government in the actual task of administration, and things of that kind. It was described by Lord Dufferin as a microscopic minority. It was ignored first, ridiculed next and openly suspected later. It was bound to come into conflict with those in authority. It maintained that it had the right to interpret the minds of the people correctly, it claimed that it knew on what lines people were thinking, what they were aspiring after, what they approved of and what they did not. The claim of the Congress to be representative of the people was absolutely denied in those days. It waited and waited, it sent its deputations to England, it carried on its agitation in India mostly among the educated classes until a time arrived when in this very city of Benares it held a session over which one of the wisest and most far-sighted leaders of that generation presided—I refer to Gopal Krishna Gokhale. It was then that it demanded a constitution similar to those of the self-governing colonies or dominions and from that moment forward a new chapter was opened in our political life. A year later the great Dadabhai Naoroji presided over the Calcutta Congress and for the first time he put forward the demand for 'Swaraj.' What did this word mean? To demand Swaraj was in those days held in official circles to be a crime—the crime of sedition. It is interesting to recall at this distance of time that the matter seriously engaged the attention of two learned Judges of the Calcutta High Court, namely, Mr. Justice Sarada Charan Mitra and Mr. Justice Fletcher. A Conference had met at Khulna. A certain speaker had asked for Swaraj, which expression was translated officially as an 'independent government.' The speaker was then bound down under section 118 of the Code of Criminal Procedure. He then moved the High Court, and I shall give you here just a short extract from the report of this case. In the course of arguments the following observations were exchanged between the Bench and the Bar :—

Mitra, J.—What is the exact word used?

Mr. White (Deputy Legal Remembrancer)—Swaraj.

Mitra, J.—What does it mean?

Mr. White—Your Lordship can say it better, but I understand it means to remove the Government.

Mitra J.—If that be its meaning, then no editor or writer here is safe. It cannot mean that.

Mr. White—But is it not the hope of a particular political party in India?

Mitra, J.—Every Indian likes to have Swaraj, meaning Home Rule.

Mr. White—They may hope so, and there is no harm in that.

Fletcher, J.—If it means the Colonial form of Government it is a legitimate aspiration of the people...

Mr. Jackson (Counsel for the accused)—The literal meaning of the word is self-government—'swa' means 'self' and 'raj' means 'government'. Mr. Dadabhai Naoroji initiated the word in his speech as President of the last Calcutta Congress.

Mitra, J.—Speaking for myself, I can say that the word was used by Mr. Dadabhai Naoroji in the sense of 'self-government,' and is being translated in the Bengali language in the same sense.

Ultimately in their judgment the Court held that it meant Home Rule but that self-government would not necessarily mean the exclusion of the present government or independence. It may mean, as it is well understood, government by the people themselves under the King and under British sovereignty. The word, therefore, stood the challenge that was thrown to it in a court of law. It was not, however, until 1921 that it received the imprimatur of approval from the highest quarter, for in His Royal message to the Indian Legislature through the Duke of Connaught His Majesty observed as follows :—

> For years, it may be for generations, patriotic and loyal Indians have dreamed of Swaraj for their motherland. To-day you have beginnings of Swaraj within my Empire ; and widest scope and ample opportunity for progress to the liberty which my other Dominions enjoy.

But the year 1921 marked the beginning of a new chapter altogether in our contemporary history. The Congress then adopted a new ideal or objective—different perhaps from that which Mr. Justice Mitra said the word 'Swaraj' implied. We broke away from the traditional methods of work, new cries came into vogue ; a new situation arose under a new leadership. There were defections from its ranks, but the loss was more than made up by the huge accession to its strength. The movement was then sought to be made a mass movement and it did become that to a great extent. The thinking was done

by the few, and the enthusiasm was furnished, as always happens in such cases, by the many. We were told that new ethical weapons must be forged for our political battles. Whether the cries or the methods were really new or were a revival of old ones, is a question on which opinion may well differ, but they caught the fancy of the masses. One thing, however, is certain and that is that under the new orientation of nationalism—an assertive and defiant nationalism—suffering or the readiness to suffer was considered as the most powerful and effective weapon and the acid test of patriotism. Western methods of life, at least Western methods of dress, the use of the English language in our political work came to be decried. For a time, but only for a short time, the Hindus and the Mohammedans seemed to embrace each other. It did not, however, take long before differences grew among us. If even unity of ideals could be claimed at that time, it was plain that there was a great diversity of methods of approach to those ideals. For once an open challenge seemed to have been thrown to the West. I say 'seemed' because it did not take the West long before it regained its ascendancy over our minds. Victorian Liberalism, we were assured, was dead, and something new had to be installed in its place. Again that something new came from the West. We dethroned John Stuart Mill, John Morley and every other god of that pantheon from their high pedestals. We replaced them by Karl Marx and Lenin. London began to lose its hold and Moscow began to cast its spell over us. Man came to be looked upon essentially as an economic being and if the economic basis of our life could be changed in India, we were told the gates of paradise would be within sight. There was, however, nothing peculiar to India in all this. The West itself was during this period pitifully torn by conflicting loyalties to divergent creeds and such is the ascendancy of the West over the Indian mind that the cries and the slogans, which rent the welkin in the West, were re-echoed in India. As Lord Bryce says of the West in his "Modern Democracies":

> "The other new factor (within Europe) is the emergence of a doctrine primarily economic but in its consequences political and embodying itself in the project of eliminating those sections of the community which either possess wealth or are earning it otherwise than by manual labour, so as to create and thenceforth maintain a uniformity of material conditions, perhaps along with the prohibition of private property."

I myself saw something of this conflict of ideas during my repeated visits to Europe and contacts with different people there during the eight or ten years preceding the war. Shortly before the war I was in France and some other countries of Europe. As a foreigner it would be imprudent, if not audacious,

on my part to express any dogmatic opinions on those countries, but from what I saw in Germany a year or two before the war, I can say that it did not come to me as a surprise that in 1939 war broke out in Europe, involving practically the whole of the world; nor did it come to me as a surprise that France fell after a few weeks' struggle. Those impressions have been further strengthened in my case by some of the books that have recently come out, particularly the book by Andre Maurois, which vividly describes the condition of things in France during the invasion.

The thoughtful among you are bound to ask yourselves some searching questions. What is going to be the future of the civilization of the West? Is it going to be a perpetual fight between one 'ism' and another 'ism', between one theory and another, between one set of ideas and another? Is humanity going to be bled to death and civilization going to disappear because the genius of scientists and the untold wealth of Western countries has invented, or is inventing, diabolical machines which can bring us only the peace of the grave? Were our ancestors, at whose ignorance we often marvel, less happy than we are to-day? If Europe has got to make a choice to-day between rival theories, must we also necessarily make the same choice? If the independence of the warring countries in the West, which have for centuries, or at any rate for a very long time, enjoyed complete freedom within their borders, can be trampled under feet within a few weeks in the case of some and a few months in the case of others, what is going to happen to that independence which we are aspiring after? Can non-violence be our shield against a ruthless aggressor who believes, or affects to believe that he has a mission from God or from anti-God? Must we copy civilized Europe in organizing violence for suppressing the freedom of others who want to think their own thoughts and live their own lives? Must humanity be cast everywhere in every clime and country into the same mould? Must human thought and conduct be standardized everywhere? There are many more questions which I could suggest for your consideration. It would be presumptuous on my part to answer any one of those questions dogmatically but I do suggest that at a critical juncture like this there must be some men in the country, who should consider it their duty to apply their minds to these questions and to enlighten their less-knowing countrymen. Am I indulging in vain hope when I say that again for these 'some men', we must look to our Universities?

Speaking of the Universities of the West in the early part of the nineteenth century a learned American writer says :—

The Universities of the period were not only scientific but also political centres. By fostering national sentiments they played a significant role in the political evolution of the various countries. German universities, such as Berlin and Breslau, led the nationalistic movement during the War of Liberation (1813-14); their professors and students through organizations such as the *Burschenschaft* educated the general public politically and spread the idea of national unity........Guizot, Cousin and Villemain in Paris aided in the liberalization of French politics...Spanish universities were instrumental for the downfall of Napoleon and in the spreading of liberal doctrines. Copenhagen and Christiania (now Oslo) universities were centres of Danish and Norwegian nationalism, Warsaw and Vilna of Polish and Pest of Hungarian. Moscow, Kuzan, Kharkov, St. Petersburg and Kiev promoted Slavic studies and were the nuclei of intellectual as well as political pan-Slavism.

I have often wondered whether our Universities are discharging this function in the manner in which they should. There is a cultural and an intellectual side to our national movement in the development and guidance of which the Universities can play a great, honourable, and enduring part. To be absolutely frank with you I do not look upon it as a contribution to the clearing and development of political ideas or the strengthening of the national movement that we should hear so much of strikes in our Universities and Colleges, or that the generous sentiments and the unbounded energy of our youth—the future workers and leaders—should be dissipated in the repetition of party slogans or the performance of peripatetic exercises necessarily involved in processions of protest. I might have been more discreet and kept silent, but I know that my fate for uttering these words cannot be worse than that of stout-hearted leaders like Mr. Rajagopalachari and Mr. Satyamurti.

Speaking for myself I have no hesitation in saying that I should expect our Universities to become the emporiums or clearing houses of our political ideas. I can fairly say that I have kept in touch with the output of our Universities, but if I may speak with absolute candour, I think that excepting in very rare instances I have not seen much evidence of any effort to approach the problems that are awaiting solution in a dispassionate spirit. It is unfortunate that this should be so, for while party has its use in practical politics, subservience to it on the part of those who profess to guide us has a blighting influence on their minds and the minds of those whom they wish to enlighten. It has often seemed to me that we pay a lip homage to the idea of nationalism and democracy, and wittingly or unwittingly we have been submitting to the autocracy of certain ideas and certain slogans. Nationalism in Europe was said to have sprung from the loins of the French Revolution. Essentially it was geographical, it then became

an ethnic phenomenon until it became clear that "the natural goal of every national movement is the creation, maintenance and increase in power of a national state." From the evils of nationalism in Europe—and they are and have been freely emphasized by its ctirics—people have sought refuge in inter-nationalism and to-day in Europe you have all these ideas in the melting pot with the result that you hear more of the New Order than of "nationalism" or "inter-nationalism." So devious is human history that Democracy, nationalism and inter-nationalism having for the moment received the sentence of death, the will of a single man or of the chosen few among his followers must be imposed upon all men and all countries. Whatever be the evils of "Nationalism" in Europe I think nationalism is a necessity with us and before we think of inter-nationalism or the New Order or the Federation of the world, I think we must allow nationalism a fair chance in our own country. Its task may be less ambitious than it was in Europe ; nevertheless it is more important in so far as it has got to surmount difficulties and barriers which are peculiar to us. The peculiar mission of nationalism in India, with its different religious creeds and different languages, should be to federate different sections of the community giving them full freedom in matters that affect them peculiarly but harnessing them all to the service of the common land. Nationalism in India must seek not to supersede old cultures but to supplement them by a common culture and a system of life to germinate and foster those ideas which alone can secure the integrity of the country and its unimpeded progress.

What then is the part which we are entitled to expect the Universities to play in the development of our national life ? First and foremost, I submit, we should expect our Universities not merely to impart education in modern sciences and different branches of knowledge, but to bring about a synthesis of Indian culture. I use the word 'culture' in its largest sense. I should like our young men to remember that Indian culture is a variegated mosaic and indeed it would be difficult to claim for any culture in the world that in the course of its development it had not been influenced by other cultures. I have always maintained that while it is correct to say that there is such a thing as Hindu philosophy and such a thing as Muslim philosophy, it is absurd to maintain in the year 1941 that there is such a thing as a purely Hindu Culture, and such a thing as a purely Muslim culture. As time has gone on in our history there has been a remarkable blending and fusion of the original Hindu Culture with that culture, which is popularly called the Muslim culture but which is clearly traceable to

countries like Persia and to a certain extent Arabia, with the result that at least in Northern India during the last three hundred years or more a mixed common culture has grown up which may truly be said to be 'Indian culture.' It may be that among the Hindus, elements of Hindu thought and Hindu philosophy and Hindu mode of life may predominate; it may equally be that among the Muslims, the elements of Muslim thought and Muslim philosophy and Muslim mode of life may predominate; nevertheless the mixture of the two and its existence as a single entity cannot be denied and in my opinion it would neither be wise nor patriotic to do anything to destroy this common culture and for the Hindus to substitute for it an unadulterated Hindu culture and for the Muslims to substitute for it an unadultered Muslim culture. Remember also that the last two hundred years of association with the West have also profoundly affected our mode of thinking and even our mode of life. As your distinguished Vice-Chancellor has said in a recent book of his with that detachment, which is characteristic of a philosopher,

"Today the whole world is in fusion and all is in motion. East and West are fertilizing each other, not for the first time. May we not strive for a philosophy which will combine the best of European humanism and Asiatic religion, a philosophy profounder and more living than either, endowed with greater spiritual and ethical force, which will conquer the hearts of men and compel peoples to acknowledge its sway?"

Again at another place in the same book, 'Eastern Religions and Western Thought' which due to his kindness I have lately been reading, our philosopher Vice-Chancellor observes as follows :—

"Science cannot minister to the needs of the soul; dogmatism cannot meet the needs of the intellect. Atheism and dogmatism, scepticism and blind faith, are not the only alternatives. They are the twin fruits on the same branch, the positive and negative poles of the same tendency. We cannot combat the one without combating the other. In the battlefields of Spain we find massacre, arson, despotic control. Both sides are as ruthless in their action, in their war of creeds, in their determination to stamp out the bestial thing—Marxist atheism or dogmatic Christianity. Is it a matter for surprise that some people believe that a malignant demon sat by the cradle of the unfortunate human race?

We require a religion which is both scientific and humanistic. Religion, science, and humanism were sisters in ancient India; they were allies in Greece. They must combine today if we are to attract all those who are equally indifferent to organized religion and atheism, to surpernaturalism and nihilism. We need a spiritual home, where we can live without surrendering the rights of reason or the needs of humanity. Reverence for truth is a moral value. It is dearer than Buddha or Jesus. Truth is opposed, not to reason or the Greek spirit, but to dogma and fossilized tradition. We cannot rest the case of religion any more on dogmatic supernaturalism."

Next I suggest that the one great service, which our Universities can render to the country, is that they may encourage and foster among those who are committed to their charge, those habits of thought and conduct which alone can be the true foundation of a true democracy. Again as Lord Bryce says:

"Democracy assumes not merely intelligence, but an intelligence elevated by honour, purified by sympathy, stimulated by a sense of duty to the community. It relies on the people to discern these qualities and choose its leaders by them."

It is remarkable that in this matter the views of this philosopher-statesman of England should coincide with those of Sir Radhakrishnan. "The future of democracy", says Lord Bryce, "is a part of two larger branches of enquiry, the future of religion and the prospects of human progress." I shall beg you to compare this wise observation of Lord Bryce with that of Sir Radhakrishnan, which I have quoted above. Perhaps you will excuse a man of my way of thinking if he may venture most heartily to emphasise what Sir Radhakrishnan has, in his inimitable language, spoken of as the "opposition of truth to dogma and fossilized tradition."

The greatest need perhaps of Indian democracy, that is yet to be, is leadership. It is inevitable in conditions, such as we are witnessing to-day in our country, that our thoughts should often be running on sectional or party lines and in the clash of ideas that we notice in the country, there should be not only conflict between one community and another but between one party and another. In the midst of this clash there is nothing more easy for each party and each community than to assume that it is or at least it represents the entire nation, or that it constitutes a separate nation. We sometimes delude ourselves with superficial historical analogies. When we are quarrelling on the question of Indian languages, we refer to the multiplicity of languages in Switzerland and South Africa, if we do not do worse. We justify outbursts of religious intolenance by pointing of certain chapters in the history of other countries and we always take care to point out that it is the presence of the 'third party' and its machiavellian machinations, which are far more responsible than our own conduct, our own omissions, our own failings, for that spirit of disunity, which is at the present moment disfiguring our public life. I do not propose to examine the truth of any one of these justifying pleas. Let it be granted that each one of them is true and valid, but I cannot help thinking that we have allowed our pride and

our prejudices to stand in our way. If we know that there are some scheming people about, who think that their chance lies in our continued disunity, why do we play their game? Why can we not rise superior to these conditions? It seems to me that if we want to establish a really democratic state of society and government, we need not paralyse our whole activity merely because we cannot attain perfection immediately, or adopt a system which would stand the test of the most fastidious conformist to the fundamentals of western democracy. We must, therefore, look to a new kind of leadership in place of that which begins and ends with party supremacy. Again, if I may be permitted to quote Lord Bryce:

"The predominance of Party in democracies has made us, when we talk of leadership, think primarily of the militant function of the general who directs a political campaign and bears, like the champions in ancient warfare, the brunt of battle in his own person. But the best kind of leader has a duty to the whole people as well as to his party. If he is in power, he must think first of the national welfare; if he is in opposition he has nevertheless the responsibility of directing the minds and the wills of a large section of the people, and of aiding or resisting the policy of the Administration. In both cases his actions as well as his views and argument and exhortations, have weight with the whole nation for good or for evil."

I do not expect general agreement with these views. Some of these, I fear, may be described as mere platitudes, they may even be condemned as intolerable heresies, but I hold very very strongly that the Universities must recognise their responsibility in proving the type of leaders, who feel that they owe duty to the whole people and not merely to their party, for I fear at the present moment the nation has receded in the background and party is occupying the forefront. Even if I am told by some that my whole argument rests on the false assumption that there is already a nation *in essue*, I shall not demur to that criticism, but I shall venture to say that if the nation is not an accepted fact, yet the necessity of its creation in the future must be recognised by all unless, of course, we have made up our minds that India must in future consist of a loosely united congeries of different communities, actuated by different ideals and impelled by different urges. To achive this object we shall have to learn the superme lesson of compromise in politics—a lesson to which an human history bears witness, a lesson which, when forgotten, has led to disastrous results in the history of humanity. Summing up the career of Julius Caesar, Mommsen says in a remarkable passage in his "History of Rome"

"Caesar is, in fine, perhaps the only one of those mighty men, who has preserved to the end of his career the statesmen's tact of discriminating

between the possible and the impossible, and has not broken down in the task which for nobly gifted natures is the most difficult of all—the task of recognising when on the pinnacle of success, its natural limits. What was possible he performed and left the possible good undone for the sake of the impossible better, never disdained at least to mitigate by palliatiees evils that were incurable."

If you want to be convinced of the soundness of the principles which guided Julius Caesar, compare the Rome of his time with the Rome of the time of Mussolini. It is for the cultivation of some such spirit among your alumni that I earnestly plead.

"A political institution" so said a great English statesman once, "is a machine ; the motive power is the national character. With that it rests, whether the machine will benefit society, or destroy it. Society in this country (by which he meant England) is perplexed, almost paralysed ; in time it will move, and it will devise. How are the elements of the nation to be blended again together ? In what spirit is that reorganisation to take place ?" How this description of the England of three generations back is true of India today is a matter for you to consider. The main questions, therefore, which must engage the attention of all thoughtful men are those formulated by Disraeli. How are the elements of the 'nation' to be blended together in India ? In what spirit is that reorganisation to take place ? These are questions which can easily be answered by enthusiastic party politicians according to their lights, but their answers will not, I fear, lead to a solution which may plant our feet on the road to uninterrupted progress. They have, I fear, failed to do so until the present moment. Each one of the parties can justify itself in the light of the axioms which it has adopted or prescribed for itself, but from a national point of view, I fear, each one of those parties is as far-off today from the solution of our problems as it was 10 years ago or more. Perhaps we are farther away. We want, we say, an absolutely free Constitution. I agree that that constitution should be the constitution of a fully free and self-governing country, but the real problem is not about the ideal but as to the method of attaining that ideal, or at least making the nearest possible approach to it. It is again a tribute to the supremacy of the hold of the West on our minds that some of us will not be happy unless all the features of the constitution of England are reproduced in our future constitution. It is also a tribute to the supermacy of the hold of another part of the West that others will not be happy with the British model. The constitution which will make them happy must bear more or less the impress of Russia or something like it. Time is fleeting and no one can feel sure what the future has in

store for Russia or for us, and yet I feel that at this juncture our learned professors may do worse than rescue themselves from party slogans and shibboleths, study the realities of the situation, the possibilities and the impossibilities of a particular line of advance, which we cannot ignore excepting at our own peril, and enable us by their wisdom and dispassionate judgment, by the result of their study, to see the light. Perhaps they alone can furnish the material for the practical statesman—the statesman of whom Napoleon once said that "his heart should be in his head." I am deliberately refraining from going into the intricacies of the various problems which confront you, but I am only begging that the learned among you may justify their existence, as Universities in the West have done in epochs of national ferment by battling against the forces of darkness, prejudice and passion.

Today you have certain practical issues waiting for solution and I venture to make a few suggestions for your Department of Politics. We have been told authoritatively that it is for Indians to frame a Constitution. If we have to frame a Constitution, If we have to frame such a Constitution, let us be serious about it. The spade work must be done by men who have the time and leisure and above all a thorough knowledge of our country and also of the constitutions of other countries. In our case if political power is to drift into Indian hands, it is clear to my mind that it cannot be reposed into the hands of the few. The ultimate responsibility must be owed to the country at large. This being so, I assume that democracy, *i.e.*, a form of government in which those who will actually administer our affairs shall in the last resort hold themselves responsible to the will of the many, is the only alternative before us. The basis, however, of such a government must be popular franchise. There are some among us who think that the franchise should be widened—widened to the extent of its becoming 'adult franchise'. There are others who look upon the existing franchise as solely or mainly responsible for those evils, real or fancied, which, they say, have followed in the train of the Constitution of 1935. It has been suggested in some quarters that we must turn from the existing system to the system of 'functional representation.' The subject of functional representation, examined in its historical aspect in countries of the West from the time of the Middle Ages, as interpreted and emphasised under Guild Socialism in France, Fascism in Italy, Nazism in Germany and Socialism or Communism in Russia, is one of fascinating interest—not without its lessons and warnings, to us all. It is for you to come to your own independent

conclusion though I confess that such study as I have been able to make of it, has convinced me that nothing can be more disastrous to the growth of democratic ideas in India than the adoption of this system. Similarly broad hints have been given in high quarters that perhaps a system of irremovable executive will suit us better than the system under which Ministers have got to depend upon popular vote and party strength. Again I say the question requires careful study and it will be for your professors to tell us whether it is possible for us to adopt the American Presidential System, or the Swiss System, or any other similar system, or whether none of these systems will suit the conditions of India. Similarly in any serious attempt to study the problems of constitution you will be called upon to do more deep thinking about the problems of defence of India. The present war has already shown that the methods of defence adopted hitherto are out-of-date and that instead of India being exposed to danger only at its North-West frontier, it is exposed to dangers of a serious character practically on all sides. We cannot assume that because we do not mean to pick up a quarrel with any other nation in the world, we need have no fear now or in future of any danger from outside. The world does not consist of, and has never consisted of 'angels', though I believe angels too were in the habit of quarrelling among themselves, and there are plenty of such angels to-day in human form almost everywhere in the world, with more than one ambitious arch-angel, anxious to establish his own new order. In studying problems of defence you are bound to come up against problems of industries, and if the present situation is borne in mind, we can only come to one conclusion and that is that the dissociation of industrial development in our country from the problems of defence by those who were in power has brought them and us to the very brink of danger. I do not know what is really at the back of the minds of those who often talk to us from across the seas with pontifical au-authority about our future. I cannot say whether they want really that India should stand on her legs in future in every department of life, including defence, or whether the freedom of India shall be more or less a replica of the freedom of Egypt with all the weakness of its position, as it has been demonstrated in our own times. I do not deny that Lord Milner was a great statesman, but I maintain that history has proved that Lord Durham and Sir Henry Campbell-Bannerman were greater ones, and speaking for myself I should like something of their spirit to be introduced in place of the Milner spirit. Lastly, and this perhaps will be the most important subject for your study, will be the question of the Minorities. There is perhaps

no one more anxious than I am for a genuine, honest and honourable settlement with the Minorities but it may be for those among you who may apply their minds to this subject, to tell us how best we can proceed to achieve that end. You will have to disentangle this problem from those knots which have been tied up in recent years by false assumptions, false reading of history and prejudices and passions. The problem is one of infinite difficulty, but I maintain that in the handling of no other problem is there greater necessity for a spirit of genuine compromise. Again do not forget that the integrity of India can never be secured and you can never have a truly national government unless and until you have found a place in your system for that one-third part of it which is represented by the Indian States. Not many years ago I was hoping that we were within sight of a solution even though that solution had its imperfections. I am still not without hope that some solution may be found, but I warn you that the problem is one of great complexity and will make the largest demand on your patience, on your judgment and on your statesmanship. Mere theoretical discussions about 'sovereignty' or 'equality of conditions and rights' will, I fear, not help you. The problem should, in my opinion, be approached from a strictly practical and realistic point of view. In short, I suggest that our present task should be to prepare the framework of the Constitution, leaving it to experience and the varying necessities of the future to strengthen and improve the superstructure that we may raise now. In all this task the learned and the thoughtful among our University men can render inestimable service and I do, therefore, suggest that under the wise guidance of your Vice-Chancellor your Department of Politics may at once begin to study all these problems in the spirit in which they should be in the calm and serene atmosphere of a University.

I am afraid I have already exceeded the limits which I had prescribed for myself when I commenced this address. If instead of venturing to discuss educational problems, which I know can be far better discussed by educationists of repute and experience among you, or referring to the question of unemployment among the educated classes—a subject in which I have been much interested and on which I have written or spoken on other platforms—I have ventured to draw your attention to some of the current problems of the country and to the dangers looming ahead, it is only because I feel that you are keenly interested in them, as indeed you should be, and because I am anxious that some departments of your great University may make a valuable contribution to the elucidation

of some political and constitutional ideas, not in the spirit of wrangling politicians eager to score dialectical victories but in that of earnest investigators of fact. The students themselves, to whom I am now going to address a few words, can take their proper part in this process of investigation. I have already said that it is the function of the University—and it is an obvious fact—to impart education to our young men and stimulate their latent intellectual faculties and tastes. There is, however, one appeal that I shall make to the students and that is that they should realize that their educational process does not end with the taking of their degrees at the University. It is only the beginning of a new chapter in their life. They must keep up their habits of study and must, on no account, allow their minds to rust. Unfortunately it is only too true that the habit of self-education and self-culture, which must mark every true man of culture throughout his life, is not sedulously cultivated by a large number of our graduates. I should like every young man and young woman present here to ask himself or herself one question at the end of each day in his or her life. How much have I learnt to-day? What addition to my store of knowledge have I made to-day? But more than that what is necessary is that you should cultivate the habit of balanced judgment in the practical affairs of life, learn to weigh the conflicting opinions that are placed before you, to correlate the theories of life, howsoever attractive they may appear in cold print, to the facts of life, and above all to cultivate a spirit of humility and avoid that snobbery, which is very often the mark of a person of little learning. If this is the advice that I am going to give you for your intellectual life, I shall only venture to suggest to you that there is a deeper life than mere intellectual life, and that is the spiritual and moral life in the truest sense of the word. In the actual affairs of life there will be many occasions on which you will be called upon to prove your fidelity to those principles which you have been taught here or which you will gather from books. Such occasions are the supreme tests of a man's moral vitality and I sincerely hope and trust that you may fully stand those tests. It is in the ordinary affairs of life, in your dealings with your friends and with your enemies, with your neighbours and strangers, and with others less happily circumstanced than you are, that you can show whether the principles which you have imbibed here have become a part and parcel of your life, and thus and thus alone can you justify the reputation of this great University. There is great wisdom in the old adage "Every tree is known by the fruit it bears." Let the fruits of this University be such as will be its best title to glory.

AN APPROACH TO THE RĀMĀYAṆA

C. NARAYANA MENON, M.A., Ph.D., D.Litt.

I

THE TWO WORLDS

(i)

Literature, religion and the fine arts are now-a-days taught in such a way as to deprive them of their old power to mould inner life, and so man's control of himself has not kept pace with his control of outer nature. Hypnotized by the success of science, we apply the externals of its method to liberal studies, so that literary research has come to mean the accumulation of information pertaining to the external world; but we ought to know that the primary concern of literature is with the world within.

The way the great Indian poems were composed makes this clear. When Vālmīki was asked to compose a poem on the life of Rāma who was his contemporary, he did not study official records or interview the personages concerned, but sat in solitude and meditated with closed eyes until he saw the whole story within himself. Similarly, to write the story of Krishna who was a contemporary, Vyāsa meditated in solitude. To grasp the truth of what happens in the world a poet looks into himself.

Certain external facts served Vālmīki and Vyāsa as themes because those facts coincided with inner truth. To visualize this psychological truth the ancients laid down the hypothesis that a significant external object has a counterpart within. A teacher, for example, has his representative within the student. A student who was baffled by a problem saw in a dream his teacher approaching and giving him the clue; Ekalavya received instruction from the teacher he set up within himself. It follows that the person whom a student looks upon as his teacher is merely the external symbol of the real teacher. So in the *Adhyātma Rāmāyaṇa*, Rāma says that a student should look upon his teacher as the representative of Rāma. Tulsī makes Vālmīki say that Rāma lives in the hearts of those who venerate their own teachers. According to one sect, the "mul mantra" of Rāma is "Guru."

What is true of a teacher who guides pupils is also true of a leader who guides people. When Gandhiji issued his appeal, an obscure villager took an oath that he would give up drink. One day however temptation proved too strong. That night Gandhiji appeared to him in a dream and thence-forth he got such strength of mind that his drink habit was conquered for ever. The Gandhiji who wields the iron rod of discipline is the ideal that men cherish. A true leader or king is the higher self of his subjects, and in that sense he is God.

Vālmīki therefore hinted that the hero of his story is God, and the thousand and one versions of the story that followed made this more clear. Tennyson began narrating the history of an ancient British king; but, as the *Idylls* progressed, he discovered that king Arthur was the soul. The *Adhyātma Rāmāyaṇa* opens with a section called the Heart of Rāma where in Sita reveals to Hanuman that Rāma is the ultimate God.

(ii)

Before requesting Sita to reveal this truth to Hanuman, Rāma observes that Hanuman is fit to receive this truth because he has lasting devotion. Modern psychology shows that a devotee is a person who has incorporated in himself the object of his devotion. The part of the devotee's mind representing himself worships another part representing the ideal. So when Sita has finished expounding the truth that Rāma is the Paramātmā, Rāma develops the doctrine to its logical climax by telling Hanuman, "Thou art it." Ultimately there is no division or distinction between Hanuman the devotee and Rāma the object of devotion.

The Paramātma or Rāma that Hanuman realised must have been in him before he came in contact with Rāma. In *Adhyātma Rāmāyaṇa*, the quest of the Paramātma is compared to the search of an ornament which is already on the body. The desire to give up drink must have been in the villager before Gandhiji issued his appeal. Christ must have been already in Peter, else he would not have left his net to follow Jesus. As soon as Hanuman met Rāma for the first time, he recognized Rāma to be the author of the universe who, residing in the hearts of creatures, impels them to fulfil themselves. Only from that moment did Hanuman begin to realise his own great ness. Till then he is said to have been under a curse.

Thenceforth Hanuman works wonders through faith in Rāma. He defeats the Rakshasa hosts shouting, "Victory to

Rām!" Rāma says that Hanuman has accomplished what even Gods could not. Tulsī, with a tinge of allowable exaggeration, asserts that a servant of Rāma is greater than Rāma himself. For within the devotee resides the eternal Rāma and not merely the king of Ayodhya. Rāma left this life, but Hanuman will remain on earth as long as the story of Rāma remains. Wherever the *Rāmāyaṇa* is being recited, Hanuman is present among the audience.

It is the Hanuman in us that listens with reverence, and the process enables that Hanuman to realise the Rāma in the story; even as Hanuman, after working for the defeat of Rāvana, discovered Rāma to be the Paramātma and that Paramātma to be himself. The *Rāmāyaṇa* enables the reader to realise his own truth.

That is baptism. Each section of Tulsī's book is called a descent into the holy lake of Rāma's story which cleanses the reader of every defilement of the world. The story of Rāma is the destroyer of worldly impurity and the very parent of devotion to Sita and Rāma.

(iii)

This devotion is roused not by Rāma but by the story of what he did when he appeared as a man. The author of the *Adhyātma Rāmāyaṇa* and Tulsī are never tired of repeating that Rāma the ultimate divinity had no need of fighting and suffering, but that he acted as he did so that "the fame of it when spread abroad might tend to the redemption of the world." Rāma is incomprehensible, it is only his manifestation that we can contemplate. From the human point of view, therefore, the story of Rāma is more significant than Rāma himself. Tulsī met Rāma but did not recognize the object of his devotion: the mental attitude requisite for the awareness of Rāma's presence is induced by the story. Since the name Rāma enables us to recall the whole, we can, without going into the mysteries of *mantra*, understand that the name is greater than Rāma himself. "Rāma redeemed only one woman, the ascetic's wife; but his name has corrected the errors of millions of sinners."

The belief that the words of the *Rāmāyaṇa* constitute the body of Rāma need not be dismissed with scorn. Let us begin with an analogy. The touch of a child yields pleasure to the father; but, if his attention is elsewhere, he feels nothing. It is not the contact of skin with skin that gives pleasure. Vilva-

mangalam felt bliss when Krishna came as a child and touched him. What sort of body had Krishna then? The hypothesis is that the Lord has a body made up of bliss. He is "ananda-swarupa." Rāma's contemporaries felt that he had a body; but the body which arose out of a sacrifice and returned to Vaikuntha, the abode of bliss, is the bliss body. Both the *Rāmāyaṇa* and the Bible talk of immaculate conception and bodily ascension. The bliss body is capable of manifestation everywhere and always. When Peter's devotion asserted itself, he saw Christ; and, wherever two or three believers meet, He is present. During the earthly sojourn, Rāma's bliss body awoke the higher self of the devotees, and his story rouses the same higher self to-day. The identity of the Word and the Christ is an abiding mystery.

(iv)

The subject matter of literature, therefore, is not the dead past but the eternal present. Speculations about Christ the carpenter and Rāma the Aryan imperialist are wholly beside the point. The Ceylonese peasant points out with pride the spot where Sita sat. Research may call into question the identity of Lanka and Ceylon; but our response to literature does not depend on the shifty findings of research.

Suppose that at Jubbulpore a stone is discovered containing the inscription, "Here Rāvana, ruler of this country, Lanka, was killed by Rāma, King of Ayodhya." Will it confirm Mr. Parameshwara Ayar's theory that Lanka is the territory near Jubbulpore? We can buy photographs of the stone on which Tess placed a coin to learn her fate. Does it prove that Tess lived? Hardy gave a local habitation and a name to the product of his imagination; because that makes the story seem real. If the Cholas localised the story of Rāma in their territory, they did what many others did. If you look into your post office guide you will see that Lanka is in Benares. The Lanka where Rāma defeats Rāvana is like Dharmakshetra where the fight between good and evil is eternally going on.

It can be localised anywhere outside or inside. Sarabhanga and other devotees saw Rāma in their hearts. Those who have performed Upāsana of Rāma say that Rāma appears in the muladhara to bestow worldly enjoyment, in the heart to give power, and in the brain to give knowledge. Readers of *Devī Māhātmya* will note the resemblance between this and the appearance of Durga as Kali, Lakshmi and Saraswati.

This points to the affinity between tantra and literature. Both are based on the Veda. Vyāsa, finding no satisfaction in the Vedas, composed the *Bhāgavata* which contains the essence of the Vedas. The opening section says that it is the fruit of the tree of Veda. We enjoy it and it gives nourishment. That which is given in the guise of a story has grip on our feelings and can transform us from within; and, if the transformation clarifies the divine in us, that story is the Veda in dynamic form. The *Rāmāyaṇa* is dynamic Veda. "The Vedas are the holy mountain, the story of Rāma its glorious mine."

(v)

If it is not necessary to determine the geographical position of Lanka, it is equally unnecessary to assign Rāma to any historical age. The writers themselves made no such attempt. Describing the marriage ceremony, Vālmīki mentions fire and the seat of grass; but Tulsī mentions the procession of elephants, horses, sedans, bards, girls and even the practice of throwing pieces of money among the crowd which is still kept up by rich families. In Malabar there are people who narrate the story, and I have noted how it is made to fit different classes of listeners. The dress of characters in Ram Leela, the popular presentation of the story in North India, resembles the dress used in Nattu Koothu, and Ramanattam or Kathakali, similar popular presentations in Ceylon and Malabar. The principle that operates is everywhere the same: dress and manners should be unobtrusive. Shakespeare's Cleopatra dressed like any other female character, and so the audience were aware of the eternal longings in her. She is alive to-day, but the characters embodying the findings of antiquarian research are all dead. Were they ever alive? A character which calls into activity the archæologist in us is only a dead relic displayed in a museum. Rāma has enchanted India and greater India including Tibet and Iran, Thailand and Java, because he is alive.

The student of history asks, "Who was Rāma?" But the student of literature asks, "Who is Rāma?" The Rāma or Christ of some distant past does not concern us. We are concerned with the Christ of whom St. Paul spoke, and into whom the readers of the Bible grow.

Though the world appears extended in time and space, we do not unravel its mystery by globe-trotting and excavations. The key is within. Atma Vidya is Brahma Vidya. That is the Veda and the Veda is in the story of Rāma.

II

Living Literature

(i)

Let us, therefore, look upon the *Rāmāyaṇa* as living, for books treated as fossils make fossils of men. A book is not an object moulded at one point of time by one mind which itself was moulded by environment. The most complete information about Vālmīki and his environment will only make me form my idea of Vālmīki's idea of what would please his audience. Such intellectual activity hinders the experience that the story ought to induce. Literature survives because the fundamental human nature has not changed ; it is by diving to the root of our own being that we understand poetry or life, whether ancient or modern.

This is the inner meaning of the information that the *Rāmāyaṇa* gives about its author. Seeing a bird shot by a hunter, he uttered a verse which had an unsuspected significance. This symbolises poetic inspiration: some incident strikes a chord, and the universal eternal meaning of what comes out baffles the poet himself, for it has no obvious reference to the incident. In short, poetic composition is not determined by environment, nor is it a voluntary attempt to please an audience.

The next thing we are told is that, to discover the story of Rāma, he sat in meditation, because the story exists always in Brahma or the cosmic mind. In other words, the story does not belong to Vālmīki's empirical personality. The knowledge of his private life will not help the reader; he must undergo the discipline of poetie contemplation by renouncing the cravings of the ego.

The *Adhyātma Rāmāyaṇa* makes this clear by giving an account of Vālmīki's early life. To maintain his wife he used to rob men until he received the mantra of Rāma by repeating which he realised the Rāma who pervades creation. On the face of it, this story resembles the stories narrated in sacred books to illustrate truths of spiritual life. The average man with his egoistic attachments exploits others in order to please the persons he loves. But when he discovers that all are Rāma, the poetic faculty rises. Tulsī points out that, when we overcome lust and greed, Rāma is perceived. The incidents about

Vālmīki occur in the text of the ancient books and constitute not a life of the writer but a sign-post to the reader.

The theory that we cannot appreciate a book without knowing the life of the author is traceable to the belief that the romantics expressed personality. Let us take the prince of romantics himself. Lamb's genius was discovered by readers who did not know his identity; and it is doubtful whether our knowledge of his life has enhanced the appreciation of his essays. When I read "Old China" to the students of the Cambridge School Certificate class, so powerful was the response that not an eye remained dry. The essay should appeal more to grown-up people; but, when it was read to the M.A. class, there was little response. A student told me that when the essay was being read he had the following train of thoughts:—"In the essay Bridget is a cousin whom Elia could and should have married, but Mary was Lamb's sister. Lamb loved his sister. She suffered from the Electra complex and killed her mother. All the members of the family must have been abnormal." What the modern student of literature appreciates is not literature but his own undigested Freud.

The interest in the lives of poets is explicable. Modern conditions have produced millions in whom defeated egoism craves for vicarious satisfaction, and it is but natural that they should identify themselves with poets who, as a rule, lived among people unable to recognize their greatness, but who have subsequently gained wide recognition. Recently, thousands of articles on Tagore appeared. Is it not significant that almost every writer dwelt on the honours heaped upon Tagore or some contact that the writer had with the great man? Such identification warps our response to literature.

Vālmīki lost himself in Rāma; the reader must do the same. If the West prefers to transfer interest from books to their authors, the East is not bound to follow. Professor Ivor Evans says in his *History of English Literature* that Browning is known to Englishmen more as the man who eloped with Miss Barrett than as a man who wrote poetry. To what a pass literary studies have come in the West!

(ii)

It is better to leave the psycho-analysing of poets to the psychologist and the study of historical conditions to the historian. That a good student of history can use the *Rāmāyaṇa*

as a document of the past is proved by Dr. Dharma's thesis on *The Rāmāyaṇa Polity*; but the student of literature who hopes to extract history out of Vālmīki sets out on a track beset with pitfalls. If he is not prepared to accept the references to the aeroplane, how can he accept the references to exogamy? The Jāthaka story, which is evidently older, depicts a society in which brothers marry sisters. Perceiving the need of a new social organisation, Vālmīki might have painted a future ideal or an imaginary past. Or he might have depicted the conditions that the exigencies of his plot demanded. Who can separate the elements unaffected by the shaping power of imagination in a work which sprang out of meditation with closed eyes?

(iii)

Even writers well posted with facts and figures and consciously trying to create characters representing the economic forces working in the external world, are carried away by the tensions between inner factors when creating literature. The characters imperceptibly change into representatives of inner forces. Before allowing them to incite us to activity we must ascertain whom they really represent. Otherwise we shall be behaving like the spectator of a play who got infuriated with Duryodhana, rushed to the stage and felled the actor who was personating Duryodhana with one blow.

That is what millions are doing to-day. The Bible is used as anti-Jewish propaganda, and novels claim to teach economics. All modern propoganda is literature which plays on the victim's ignorance of his own inner state. People thus accept all sorts of things without realising what they are doing. The real purpose of literature is to free us from inner compulsions.

Freud has discovered a compulsion to repeat some meaningless activity at the root of all mental troubles. A stock example is the person who quarrels with his father in childhood, his teacher during adolescence, and official superiors in manhood. He always thinks that it is against some evil in the external world that he rebels, but really he is projecting something within himself on others. He considers himself awake, but his life is a prolonged nightmare.

Tulsī says that we are like dreamers until we come to know Rāma. If, during psycho-analysis, all purposive activity is absolutely prohibited, it follows that the reader of the *Rāmāyaṇa* also must not think of his practical problems. The ancient Indians

made this an essential condition, and prescribed the reading of the Kavacha and the Kilaka in order to allay worries and fears.

Retreating to the world of literature for a time, a man is able to escape the tyranny of some rigid behaviour pattern. After that he can respond with increased meaning to his environment. Self-knowledge, self-reverence and self-control find expression in balanced conduct, a reverence for others, and the knowledge of what is good. The statistical method cannot teach what is good for others. A statistician, studying the budgets of labourers, will arrive at the conclusion that opium is what they want, not knowing that it is only to stifle hunger that labourers purchase opium. Shallow philanthropy distributes opiates. Literature shows that Rāma or Christ is the real need. When that treasure is sought, other treasures come of their own accord. Our economic problems are insoluble because we concentrate too much on economics. If the insatiable infinite hungers of men are directed to the hoarding of money, millions must necessarily starve in the midst of plenty.

(iv)

Every citizen must therefore undergo the discipline that makes him know himself and his needs, and, through imaginative sympathy, others and their needs. To train more people than necessary in the testing of rails will involve needless waste of resources, human and material; but the reading of literature entails no loss. For which reason our ancients limited vocational training to those who were likely to follow particular vocations; but they specially laid it down that the *Rāmayāṇa* could be read by all. Other Vidyas are meant for the few, Adhyātma Vidya for all. It is also the noblest of all.

III

Imaginative Identification

(i)

Bhavabhūti says that the substratum of all rasas is karuṇa. Bharata defined karuṇa as a secondary rasa derived from raudra, but, obviously, that is not what Bhavabhūti had in mind. What makes the reader grieve with Rāma when he finds the ashrama empty, or exult with Hanuman when he

sits before Ravaṇa? The reader puts himself in the situation and undergoes the experience. That is Karuṇa. All rasas rest on it.

Into whose feelings does he enter? The only possible answer is Abhinavagupta's: something latent in the reader is roused. Vālmīki saw the Rāma within himself; so does the reader too. Rāma is our potential self with whom the empirical self identifies itself. This power of identification, as John Middleton Murry observes, is permanent and unanalysable.

While Bhavabhūti values sympathy, Aristotle is said to have held the view that tragedy purges the spectator of sympathy. In defence of this, Butcher says that pity in real life contains a disturbing element. Men are supposed to suffer from excessive sympathy in real life and literature is supposed to be the remedy. But psychological investigation shows that men lack sympathy in actual life and that literature fosters sympathy.

How did Aristotle fall into this error? The famous passage in *Poetics*, "Tragedy by raising pity and fear effects the purgation of such emotions" is clarified by the reference to the cure of devotional excitement in *Politics*:—"When they listen to religious music, which excites their ecstasy, we see that they are cured like people who have been purged by some drug. And the same must happen to those who are excessively compassionate or timid." Aristotle had seen the curative effect of a religious rite; but, being a post-Socratean intellectual, he could not understand it, for religion itself looked like the madness that it cured. So he became a believer in Homœopathy eighteen centuries before Hahnemann was born. There is a temple of Sri Rāma at Triprayar, in Malabar, where hundreds of people have been cured of various diseases. I asked a friend how he explained it, and he answered, "hypnotism." Similarly Aristotle used the word catharsis. Aristotle-worshippers, unable to admit this plain fact, have offered over 100 surmises of what Aristotle meant!

Aristotle's greatness is that he correctly observed the nature of pity and fear and the effect on inner life. In *Rhetoric* he defined pity and fear in almost identical terms because he perceived that they are two reactions to the same pain got through identification. If he had not been carried away by a fashionable medicinal term, he might have discovered that it is identification that breaks the crust of the ego and harmonizes inner life.

(ii)

The inability of the ego to extend interest beyond itself is at the root of all psychological trouble. Literature is helpful because, as pointed out in *Sāhitya Darpaṇa*, it deals with what the reader feels to be himself and yet not himself. Since the character embodies the spectator's impulse, it is himself; since the impulse is not recognized, the character does not look like himself.

The attitude assumed by the reader to a character is the attitude assumed by his limited ego to the unlimited unconscious. The unconscious contains mighty impulses, both good and evil. A character like Rāma can save. Any attitude must take the reader to the infinite. Kamsa thus realized Krishna through fear, and Rāvana realized Rāma through defiance. Some therefore say that literature is Bhakti Yoga. But action, introspection and devotion are combined in the imaginative experience. We may, if we choose, call it synthetic Yoga.

The student of physics must isolate one aspect of himself in order to observe one aspect of phenomena; but, when reading a poem, the total personality of the reader comes into play. Imagination, as observed by Keats, includes all activities—sensuous, emotional and intellectual.

Though we speak of these as separate, emotions are not unrelated to the body, nor is thought independent of feeling. Each is an activity of the whole being. To understand by parts is to misunderstand the whole. If literature is to reveal our truth to ourselves, our response must be integral.

IV

The Integration of Personality

(i)

Vālmīki makes us enter into his characters and experience their thoughts, feelings and sensations. When Hanuman debates within himself what shape he should assume, the arguments for and against each pass through his mind and ours. मयि दृष्टे तु रक्षोभी रामस्य विदितात्मनः Sundar II 40-46. We share his joy when discovering Sita; and, when he is wandering about in the

magnificent city, we also experience the sights and sounds. शुश्राव काञ्ची निनदं नूपुराणां च निःस्वनम् We not only hear the tinkling sounds of zones and anklets but also imagine the beautiful girls singing and dancing within those lordly mansions.

Hanuman thus becomes real to us. Such characters seem to have an existence independent of the plot. This accounts for the continuation of their stories, like the account of the last voyage of Ulysses by Dante, the story of the rising against Bibhishan in the Thai version of *Rāmāyaṇa*, and *Mandodari* by Major K. M. Panikkar.

This power of each major character to exercise his own pull indicates that each character embodies a separate impulse.

(ii)

Literature evidently establishes relations between these. Rāma is never absent from Hanuman's thoughts. In fact the impulse within us identified with Rāma is always at the focus. Consider the conversation of which the following is a summary :—

Kaikeyi : Your father died sighing for Rāma.

Bharata : Where was my noble brother ?

Kaikeyi : In exile.

Bharata : That is the sentence for some heinous offence. Did he rob some poor subject of wealth or wife ?

Kaikeyi : Rāma never coveted wealth, nor did he even look at other women.

Not a word but has bearing on Rāma. Many of the speeches and incidents that have a shaping effect on our attitude to Rāma take place in his absence. This, and the pervading idea of dharma and many subtle touches account for the unity of effect. Ancient thinkers regarded the unity of art as organic. Every time we read a portion of the *Rāmāyana*, we must repeat a verse containing the whole story in a nutshell; and, if we are able to read only one portion of a book, there are definite prohibitions to be observed. For instance, if only one section of the *Devī Māhātmya* is to be read, the middle one must be chosen. In the *Rāmāyaṇa*, the Sundarakanda is recommended.

They thought of the effect on the integration of mind. Even in the use of the smallest epithet this principle was borne in mind. Tulsī was a peculiar adept in bringing out this contemplative value of words. Take the word, Rajaram, for example. Raja implies a mutual relation between king and subjects. He who meditates on this word is therefore forming a relation between two parts of his own mind.

If we could project on an external visual field the impression of the story, Rāma would be the centre of a complex pattern. We may recall the belief that identical benefits accrue from the perusal of the Rāmāyana and the meditation on the Srīrāmachakra or the picture of the coronation.

The need of unity in a work of art was stressed by Indian writers on poetics who say that a good poem or play has "one dominant mood which no other mood can overcome."

(iii)

The reference to the struggle between latent moods for domination shows that they were aware of the dynamic nature of impulses in the unconscious. Partly because of the persistence of infantile adjustments, and partly because of our adjustment to some restricted environment with some restricted purpose, the practical organisation of the mind keeps out the major portion of ourselves. Hence arise instability of personality and the vague sense of something lacking, lost, or left undone.

Literature relieves this tension by dissolving the crystallized organization through the exercise of what Keats described as the negative capability to be everything and nothing. The force which maintains the ordinary organization is removed. That is why response to art is spontaneous and effortless. I. A. Richards correctly observes that art gives free play to all impulses.

(iv)

We have till now visualized the mind as made of many bits, one identified with Lakshmana, a second with Hanuman and so on. We have emphasized the unity of the pattern but that does not take us far enough. The mind is neither multiple nor single. Dissociations of personality do exist, but they are not different in kind from the inner tensions that lie at the bottom of ordinary troubles.

Tension implies a pull between opposites. Research has discovered a striking resemblance between the two kinds of polarity—physical and psychological. We cannot magnetise a single end of an iron bar. Attraction and repulsion seem to be inseparable aspects of an identical process. Most modern psychologists similarly hold that some identification is at the root of mental polarity or ambivalence. Dr. Bose holds that when one aspect of an identification is in the conscious, the opposite aspect is in the unconscious ; and that, when the identification becomes complete, the duality disappears. Then the man is freed from the sway of opposites.

Rāma who never looks at other women and Rāvana who cannot resist them are two aspects of an identification within ourselves. Rāvana is bound to merge into Rāma. With keen psychological insight, the authors of the *Adhyātma* and the *Ananda Rāmāyaṇas* make Rāvana tell his wife that the war is only his plan to become one with Rāma. Tulsī also records that Rāvana's spirit entered Rāma.

(v)

The *Rāmāyaṇa* is a symbolic presentation of the integration of mind through the resolution of conflicts ; and imaginative participation induces the process in ourselves. Literature is the automatic curative activity of the mind tending to integration.

When integration is complete, when there are no separate parts and conflicts, will the mind continue to enter into the story of Rāma and Rāvana ? Our answer is implied in the formula, "The mind is neither single nor multiple." The essence of integration is freedom, fluidity or absence of compelling modifications. The person who has attained that stage can contemplate anything or nothing.

V

THE INTEGRAL AND DYNAMIC RESPONSE.

(i)

Every time we witness Shaw's *Man and Superman* we construct the same theory, but each perusal of the *Rāmāyaṇa* is a new experience. The reason is that, while Shaw stimulates

the static intellect, Vālmīki exercises the whole personality; and the progressive integration of personality changes our response from time to time.

This process is slow and complex, and not identical in all, but for our purposes it will suffice if we accept the time-honoured division into three major stages. When a child witnesses Rām Leela, the spectacular in it attracts attention. Rāvana's black body with ten heads, and Rāma's boyish grace afford sensations in the literal sense of the term. When the second stage is reached, interest is shifted to action. The sensuous element is not lost, but that part of ourselves through the activity of which we become aware of the sensuous has ceased to monopolise the light of consciousness. Those nerves have become part of a higher integration. Sensuous activity has become transparent, revealing some deeper activity in ourselves. Then follows the stage at which we are no more violently tossed about by the action. The nerves controlling impulsive activity have become subordinate to some higher centre. We see life steadily and see it whole.

Passivity, passion and poise have been treated above as integrations of the nerves at different levels. In this connection I may just refer to Dr. Rele's interpretation of the Vedic hymns regarding Vishnu. The three strides of Vishnu correspond to the three levels at which the nervous system is integrated. The lowest segments of the spinal cord delegate their power to the centres in the medulla. This is the first stride. Subsequently the cortical area of the brain is developed to receive impulses from the medulla. This is the second stride. The third takes him to the mind which is not located in any nerve. Whether Rele's interpretation of the Veda is correct or not, it gives us an analogy. The effect of Rāma, the avatar of Vishnu, on us is similar.

Perhaps, the most authoritative interpretation of the Rāmāyana is the one popularly known as *Deha Rāmāyaṇa*. It is called so because it shows the whole story as taking place in the human body.

(ii)

That we need not reject the body in order to realise Rāma is a message of hope. "Hitch your waggon to a star," said Emerson; but where is the hook long enough to reach a star? The man who has not reached the first milestone on the road

to spiritual perfection is in as intimate contact with Rāma as he who has passed the millionth milestone. The *Deha Rāmāyaṇa* says that Rāma, or the soul, successively comes under the influence of the three kinds of Māya.

Rāma's marriage symbolizes union with tāmasic māya. Subsequently the tāmasic qualities—kāma, krodha, lobha, and moha symbolized by Khara, Dushan, Trisira and the false deer—are destroyed; and tāmasic māya leaves. Then rājasic māya enters Rāma and drives him to activity. After gaining Bhakti (Hanuman) and crossing the ocean of ignorance, the rājasic qualities—mada and mātsarya symbolized by Kumbhakarna and Indrajit—fall, and Rāvana or egoism is conquered.'

This dynamic conception of life underlies all Indian literature. A quality which is treated as divine at one stage, becomes the representation of evil when a later stage is attained. Since both readers and characters undergo these changes, any attempt to fix a label on a character will be like fixing the label "milk" on a bottle within which the milk has changed into curds.

The allegorical interpretations of the *Rāmāyaṇa* are therefore of limited validity. They were given, as a rule, by ascetics who had already finished their discipline and could find pure sattva guna in Rāma. The study of these allegories does not help the average reader. Different natures find different qualities in characters. For example, one man reading the account of Rāvana surrounded by his innumerable wives and empty bottles of drink feels that Rāvana is tāmasic. Another man reading the same account notes Rāvana's aesthetic nature. A third lays stress on the fact that all these women came of their own accord to him admiring his valour. To the latter reader, Rāvana is rājasic.

Each reader should state what he himself felt. There will be as many interpretations as there are types of personality and stages of progress; but all are correct. Without self-reverence there can be no self-knowledge.

If, in our anxiety to give the correct interpretation, we accept external aid, our reading will be an attempt to find what we have been instructed to expect. It is wrong to superimpose this separate intellectual activity on the integral response that art demands.

(iii)

Vālmīki demands no such separate activity. It is true that he also describes the deputation of the gods to Vishnu; and, after Rāvana's death, the gods come to praise Rāma; but when Rāma is asked whether he is conscious of his being Vishnu, he says, "I deem myself a mortal man." The action being wedded to no theory, the dynamic response is possible.

But some temperaments respond more readily and fully to versions that conform to some interpretation. A situation as developed by the *Adhyātma Rāmāyaṇa* will illustrate this point. Rāvana who is always anxious to get death or liberation at the hands of Rāma learns from a dream sent by Rāma that Rāma's messenger is on the tree under which Sita sits. Rāvana goes and uses harsh words to Sita so that the report might hasten Rāvana's deliverance. He seems to be wooing Sita, but he is really praising Rāma. Be it further remembered that Sita who seems to grieve is only an illusory Sita.

We are apt to imagine that the poet has made the situation so unreal that the reader cannot experience the necessary emotional tension; but that is because we are unacquainted with the peculiar nature of a bhakta's mind. The Rāvana in him is hungering for union with Rāma. Even in Vālmīki's verses he finds the double meaning.

Only the man who has undergone a particular discipline like Yoga or bhakti or tantric sadhana, or Gayatri upasana; or is by nature inclined to them, can discover such meanings, and respond integrally to such art. *Adhyātma Rāmāyana* is for the initiated, Vālmīki is for all.

VI

Social Integration

(i)

Each cell of the human body seems to have its separate existence, yet all of them together constitute a single personality. We have already seen that the integrating principle is Rāma. Similarly each creature seems to have its separate existence, but really all are like the cells of a cosmic body. "The body of the Virāt is made of the material objects in their aggregate,

When we identify the ātman with our body, Brahman becomes the Virāt." The integrating principle is the self or Rāma. Tulsī therefore says that everything is a manifestation of the cosmic Rāma "who has Siva for his consciousness and Brahma for his intelligence."

If Rāma is the integrating principle, it follows that we are drawn to one another through the power of Rāma. This is called his māya. To grasp the mystery of māya we may consult *Dēvi Māhātmya*. A king who has been turned out of his kingdom meets a merchant who has been abandoned by his children. The king still feels anxious about the welfare of his subjects, and the merchant, of his children. Why do they continue to be attached? This question they put to a sage who points to birds feeding their young ones. The mother herself may be hungry, but the feeling, "My children" is stronger than hunger. A man may reason that he loves his children because he expects to be supported by them, but attachment is really independent of such props. The real reason is that he yields to māya.

The normal surrender to māya is a sign of health. The inability to feel affection for others has been traced by modern psychology to auto-eroticism and Narcissism, two mental states so hopelessly pathological that even self-confident Freud pronounces them to be incurable. The king and the merchant realise the unity of creation because they are able to respond to māya in the right way. The traditions about Vālmīki and Tulsī show that they loved their wives before rising to divine realisation.

The proper response to māya widens the ego. If we look upon each body as a completely separate object impelled by its own hunger, we cannot explain why a bird suffering from hunger should feed another body. Māya makes our behaviour contradict economic laws. We may misunderstand the attraction and fancy that we are impelled by economic motives, but what operates is the gravitation of souls. Rather, the imprisoned souls are trying to realise their unity.

Literature springs from, and embodies, that urge for communion. It satisfies the higher hunger which runs counter to the seemingly economic needs of the individual. A bone divides dogs, but a book unites men. The Bible makes us like cells of the body of the cosmic Christ; and the *Rāmāyaṇa* makes us one with the Rāma who is in all creatures.

The Virāt is not an abstract speculation: it is an attempt to give meaning and direction to experience. What Rāma is, none can know; but we see his effect on different natures, and on the same person at different times. Suppose there is heat coming from a hidden source to this room. The ice placed on the table melts and flows down. After that the same heat makes the substance become gas and rise up. Similarly individuals and communities respond to Rāma. He makes us build and break social systems. The village communities of ancient India, the city states of Greece, the nation states of Europe, and the inevitable evolution of the coming world-community are all part of his Leela or play.

The world-community would have followed the last war if the men in charge of reconstruction had any knowledge of Rāma or Christ. I may quote what I wrote years ago "The League of Nations is only a league of *nations*. Nationalism was a forward step when it weakened parochial ties; but, if humanity clings to it, megalomaniacs will become dictators; and nationalism will be a collective neurosis leading to race suicide. Any work in the right direction must begin with individuals." At each stage of progress each man is responsible not to the social system but to Rāma who creates, maintains and destroys all social systems. Undivided loyalty to swadharma symbolized by Rāma keeps men and communities in health.

(ii)

The conflicts that threaten collective life are also the conflicts that hinder the normal development of personality; and both are always traceable to some wrong attitude towards Rāma.

Ordinarily, both the development of personality and the widening of one's circle are inevitable. Reverting to our old division into three stages, we can note that each automatically leads to the next. Desire for enjoyment incites a man to gain possession of objects; and since others, impelled by the same urge, want the same objects, competition ensues. When rājasic nature develops, men fight not because they want things but because fight expresses their nature. Since man's weapon is intelligence, knowledge develops. But intellect distorted by egoism cannot perceive truth. When the sāttvic nature comes to its own, men pursue knowledge not merely to satisfy economic and egoistic needs, but to express the spirit on an infinite plane.

During the first stage a cup of wine and a girl constitute all the society a man needs; during the second stage collective pride produces highly integrated warring social units; and when the last stage is reached hearts yearn for universal communion.

The will-to-enjoyment, the will-to-power, and the yearning to escape the will by grasping the truth underlying phenomena—these are three conflicting demands. This is the choice of Paris about which Homer wrote the book which became the foundation of Greek culture. Vālmīki too served as the basis of culture for ages. What reconciliation does he depict?

To the pleasure-principle his attitude seems to be the opposite of Freud's. Rāma and his brothers observe monogamy. During banishment Rāma renounces sensual pleasure. Bhavabhūti's description of Rāma and Sita lying locked in close embrace all through the night is not in consonance with Vālmīki's. Lakshmana, Bharata and Satrugna also remain separate from their wives like hermits during the prime of life. Hanuman is a life-long celibate. Sharply contrasted to this group of characters stands Rāvana. An army of beautiful wives cannot satisfy his spirit, and yet he cherishes the illusion that sex-experience with a new woman can yield beatitude.

Though Vālmīki had not read Freud, he had some insight into the nature of the attraction that an abnormal person feels towards the wife of another man, especially the king, teacher, priest or brother. Bali appropriates his brother's wife, but Lakshmana looks upon Sita as his mother.

Sita's chastity withstands every attack. Rāvana points out that youth flits and will never return. Modern novelists are interested in the same situation. If the husband is away, some attachment grows, so that, when he returns, he is felt to be an intruder. In some novels the lovers remove the husband and feel no guilt. When sensualism is the real religion, what other criterion can remain?

The decadent literature of the west, especially France, has influenced ours. *Duniya Na Mane* captured the imagination of youth. Divested of sophistry, what is the story? A woman who considers herself physically too good for her husband drives him to suicide and inherits his wealth. As the title itself proclaims, this play does not care for the world. But literature

which is primarily a social expression cannot ignore the impulse which makes men social beings. Vālmīki is not an advocate of asceticism, but he knows that the stagnation of the life force at the level of the senses hinders the growth and social integration of personality.

The representative of society within the individual is called the Super-Ego by psycho-analysts. Freud looked upon this Super-Ego as an intruder, but even he recognized its biological value. In 1931 I suggested that the Super-Ego is innate; and by the time I reaffirmed the view at the 1941 Science Congress, many had come round to this way of thinking. The desire for self-control is as innate as the desire for self-indulgence or self-aggrandisement. In the social integration of personality this plays a prominent part.

(iv)

Since this is modelled on the father, it is but natural that Vālmīki should lay stress on Rāma's conduct towards his father. He can depose his father, but he renounces the throne. Since the elder brother also represents authority, we note that Bharata similarly renounces the throne. The most moving portion of Tulsī's book is the lament of Rāma over Lakshmana who has fallen wounded. The Ayodhya, Kishkindha and Lanka brothers offer points of comparison and contrast. We note only one. Rāvana and Kubera are brothers exactly like Bharata and Rāma. Rāvana dethrones his brother.

Vibhīshana and Sugrīva turn against their elder brothers with justification. Blind obedience to authority is not the ideal. Rāma himself does not exactly obey his father's wish. Kaikeyi narrates the story of the promise to Rāma, and Rāma, without waiting to ascertain the king's wish, commits himself. The king, who is unable to speak, gives, not a nod of approval, but a cry of anguish. When he meets Rāma next, he definitely requests Rāma to take possession of the throne. That this is his considered and genuine wish is clear from the words of the ministers to Kaikeyi.

Dasharatha is on the horns of a dilemma. Not being a modern politicain, he considers himself bound by a pledge given during war; but, if he keeps his promise, he will lose his life. The choice can be made easy for himself and beneficial to all if Rāma will assume the throne and deprive him of the power to implement his pledge.

Without seeking the advice of father, mother, brothers, teachers, ministers or citizens, Rāma arrives at a decision which affects them all. His mother and Lakshmana try to get it altered. She threatens to fast to death. But Rāma respects truth, and not the wishes of others. When truth is not in doubt, what is the need of consulting others? People may have strong opinions, but opinions are based on interests or prejudices. Are we to be governed by the greed of the greedy and the folly of fools?

Rāma sees the venerable ministers trembling with rage against Kaikeyi for undermining primogeniture on which, they think, the peace and solidarity of kingdoms depend. He also knows that the citizens are prepared to migrate with him leaving Kaikeyi to rule over a wilderness. But opinions, however unanimous, cannot invalidate truth; nor agitations, however powerful, distort justice. Even as policy, justice is superior to appeasement. Truth is the compass enabling us to traverse this stormy trackless ocean of existence; if expediency should demagnetise that needle, we shall be at the mercy of power politics. Truth is eternal dharma; and kings or fathers are rulers only to the extent that they conform to it.

VII

Ram Rajya

(i)

When Jung tells us that he prescribes art for his patients, we are impressed; but when we are told that Indian physicians prescribe the reading of the *Rāmāyaṇa*, we evince scorn. This attitude is not scientific. Psychology traces many diseases, whether mental or physical, to fear; and the *Rāmāyaṇa* cuts at the very root of fear by showing that all are Rāma. Why should it not bring health?

When fear and its derivatives are removed, a man is at peace with himself and with others. Indian thought goes one step further. We believe that when a man is at peace with others, others will be at peace with him. Sanyasis live in forests believing that a peaceful mind induces peace even in animal minds. A sanyasi whose presence makes lions tame gave a demonstration in front of the Viceroy.

(ii)

If a man by controlling his mind can control another mind, it follows that minds are not separated. Different conscious minds look like icebergs—congealed pieces of the element floating on the surface. Our ancients looked upon the cosmic mind, and not the conscious individual minds, as the basic reality. Rāma is said to exist there eternally.

This may seem absurd to us because modern thought is ego-centric. But is the conscious ego the centre? Obeying a post-hypnotic suggestion, a lady came out one clear evening with an umbrella. When asked why she took an umbrella, she replied that she expected rain. That we are similarly conforming to thoughts existing in a cosmic mind is a tenable hypothesis. If a piece of iron within an electric field could reason, it would say, "I have magnetic power." The individual similarly feels that he generates power, but it is likely that an unseen power generates him.

(iii)

The above theories correspond to two categories of spiritual experience. Indians are fond of the comparison to the monkey and the cat. The young one of the monkey has to cling to its mother using its own strength, but the cat carries her kitten. One man strives to carry heaven by assault, the other opens his gate for heaven to enter.

Literature is allied to the latter method. The attitude to it is one of receptivity, surrender. Rāma or Christ invades the ego. As Tulsī puts it, only he to whom Rāma shows special favour can set his feet on the road to salvation known as the *Rāmāyaṇa*.

The surrender of the will of the reader to Rāma is essential. The *Devī Māhātmya* asserts that a person who reads without first dedicating himself, his possessions, his thoughts and actions to the deity, reads in vain. Before and after reading the *Rāmāyaṇa* we repeat a number of verses to the effect that our thoughts and actions are dedicated to Rāma.

(iv)

Pious people have recorded their experience that good thoughts created external circumstances which prevented them

from going astray. Rāma is a universal mighty force guarding readers of the *Rāmāyaṇa* from doing evil to others.

If a good book generates good influences, bad books are equally potent for mischief. The division of books into spiritual and secular is unscientific and harmful, for all literature acts on the spirit. People read the Bible for one hour on Sunday, and the remaining 167 hours of the week their minds are soaked in sex-novels, biographies of money-makers, and radio broadcasts denouncing other nations. The deities unto whom they really commend themselves are Belial, Mammon and Satan; and small wonder that these deities take charge of them and their affairs.

Rāma is our genuine self. It is divine because man's swabhāva is also God's bhāva. The Hound of Heaven is the real self. Rāma's rule implies no submission to external force; His yoke is easy to bear, for law and impulse coincide. That is the only freedom or swarajya worth achieving.

When there is no conflict within the individual or with his environment, there will be no need of laws to punish offences. The only beating known in Rām Rājya, says Tulsī, is the beating of time to music. When Rāma who integrates all life is realised, men cannot fight among themselves any more than branches of the same tree can stifle one another. Rām Rājya, Islam, and the coming of the Cosmic Christ mean one and the same thing: peace through acceptance of the will of the Highest.

POLITICS, NATIONAL AND INTERNATIONAL

S. V. PUNTAMBEKAR, M.A.

To-day there is a great crisis developing in human life and its established relationships. We find a revolution in ideas and a revolution in warfare, and a break-up of old moral views,—values and virtues. We see before us the *debris* of all movements and ambitions of the defeated and conquered. Is a new world order bound to emerge out of it or is it a premature and fond hope of our wishful thinking? What are the maladies and dangers which have taken root in the human world of to-day? We see there an imperialism of machines, (2) of masses, (3) of youth, (4) of sects, communities, nationalities, and still greater (5) of nations, powerful and organised for war, aggression and conquest. We ourselves, however, are engulfed in the empire of the ignorant, the fanatic and the wicked. Their desire for license and loot, their lack of character and noble belief are haunting us at every stage. India has now become the happy hunting-ground of all kinds of mal-contents. Its timid atmosphere has afforded asylum to all political riff-raffs, economic refugees and religious nincompoops born within and coming from abroad, and to their superstitions and fanaticisms. At their bold instigation and at our weak connivance we are fighting small local medieval battles in the name of religion and culture, but really for our pet beliefs and superstitions, for economic rivalry and political encroachment, to gain the empire of the modern world—an empire of intellect and grit, of machines and organisations, of efficiency and common humanity.

The unsatisfied historical ambitions of foreign communities settled here as neighbours which are waiting for adverse events to happen are also finding expression in their leaders' aims and actions, and their political games and utterances. They are becoming the greatest force in disrupting our national life and checking our national ambitions. Our public life is now full of five per cent extremists, five per cent fanatics, twenty per cent liberals and the rest tremblers and wobblers who submit or follow the first ten. We are losing our identity of interests, unity of thought, common aspirations and actions which alone can unite us for a great destiny. Whatever homogeneity we had achieved in our life in the past was broken in the eighties. The nineties were a period of unsettlement. The nation then got out of health. Its temper became explosive and quarrelsome. Whole classes or strata of society began to feel free in some degree and to taste power for the

first time. A kind of upstart arrogance became vocal with them. Now we find in religion, in social relations, in politics, in business, men grown contemptuous of old ideals and order asserting new ones. They have no clear objectives. There is no unity of movements. Religionism, liberalism, communalism and socialism, all play havoc with us. There is a revulsion from old puritanism of character and creed to a new raffishness and vulgarisation of life and to a rapid relaxation in social and moral values.

Then what are the remedies?

Remedies suggested are :—

1. Violence *versus* Non-violence
2. Co-operation *versus* Non-co-operation
3. Liberalism *versus* Nationalism
4. Democracy *versus* Dictatorship
5. Country *versus* Community
6. Unity *versus* Separation
7. Fusion *versus* Disruption
8. Unitary Government *versus* Federal Government
9. Parliamentary Democracy *versus* Socialism
10. Materialism *versus* Spiritualism

Our chief aim is however Swarajya. It means mainly :—

(1) Independance from foreign rule ; and
(2) Democracy—political and social—at home.

The question however is not whether it is desirable but whether it is possible. Then what are the conditions necessary for its success?

1. A favourable time-spirit ;

2. An organised centre of power within the country which will achieve it, and control peace, order and freedom in it ;

3. The will to achieve, the will to resist, and not to surrender or merely to vegetate in homes and clubs ; and

4. A strong defence-consciousness.

Gooch says "Nationalism denotes the resolve of a group of human beings to share their fortunes, and to exercise exclusive control over their own actions. Where such a conscious determination exists there should be a state, and there will be no abiding peace until there is a state. Where there is a soul there should be a body in which it may dwell. The basis of nationalism is no doubt instinct, but the nationalism that rests on instinct alone will never enlarge and purify a nation's soul."

The gospel that a people with a distinct national culture and self-consciousness should be allowed to live its own life shows still no signs of losing its appeal and power. But this is possible only when each nation respects the rights and aspirations of others as its own, and recognises its subordination to the welfare of humanity. Liberalism and nationalism are the two gifts of the French Revolution and the 19th century. They involve

1. Sovereignty of the people,
2. Liberty and equality of the individual,
3. Conception of Nation-State.

One is individualistic and democratic, the other is collectivistic and authoritarian. India is no doubt a geographical expression. In it liberalism and nationalism are working together to elevate and unite its people. To the revolutionaries however liberalism is the vital force, with nationalism as a useful handmaid. To the patriots nationalism is the primary binding force with liberalism as its elevating and levelling weapon.

But to liberalise separately all the various states in India is an almost hopeless task. Therefore, shall liberalism wait or nationalism is the question. To work for a united India means in practice a state controlled by the British or some powerful state in which liberalism is necessary but does not exist, or by some national party in which liberalism is there but strength does not exist. Shall we then first try to make the nation-state or to get liberal rights? These two movements are still intermingled and confused in India. What we want most urgently is freedom from immediate foreign control. We want a nation-state. The essential antagonism between nationalism and liberalism is not yet made clear in our country but they are no doubt fundamentally opposed. Nationalism emphasises the group and makes it intolerant of the individual rights, which are the very basis of liberalism.

A nation-state can come into existence in India as elsewhere in three ways :—

(1) A strong centralised and existing government can impose it by force.
(2) An organised state or party can create it partly by force and partly by consent.
(3) The people can create it by agreement and consent.

But only the second method is possible and practicable at present.

The sentiment of Nationality was born in India in the crisis of the country's fate under British rule. Poets, philo-

sophers, dramatists, artists, politicians, religious and social reformers arose and gave expression to its necessity and desirability. It has however become again weak to-day owing to the desire for individual and group rights and narrow democratic sentiments. Therefore a new crisis is necessary in our life. Defeat, by compelling people to stand together, has generally been more effective than victory in encouraging nationalism.

At present the danger is that initiative does not reside in the people as a whole, but only in political and religious groups and their dictators, bosses and rings. The growing strength of princes, landlords, foreigners and minorities is another danger. The future of India can never be secure while in province there exists a system of government in direct antagonism to every constituent and national principle. The tragedy of India is that she has tried the parliamentary system too soon. That system takes for granted the existence of a homogeneous society. Without it it is more likely to accentuate than to obliterate differences. Democracy has set in fissiparous tendencies, because we believe in communities and groups.

To offer political and other freedoms to individuals who have not yet learned to live together in reasonable harmony is likely to postpone the accomplishment of that harmony. We have soon got dissatisfied with parliamentary system and have now renounced power. Hence our failure to produce real political parties and loyalties is our another defect. Without them parliamentary democracy becomes impossible. In India, local interests and communal personalities count for more than common political views and loyalties. Then there is a lot of corruption, bribery and graft in our politics. A system of *Transformismo*, as it were, exists. These are some of the causes of a set-back to our Nationalism.

To-day events are moving very fast and quickly. We cannot predict what will happen to-morrow. The greatest factor which is changing the current of history is the military factor—the force of organised might. In the world crisis which it has created we feel very keenly Britain's Phoenix-like attitude towards our demands. It is irritating and exasperating, no doubt. British imperial idealism and also its democratic system seem at present to be practically frozen. It has given rise to a long-continued political crisis or tension in India. The British have proved unable or unwilling to weld together the various elements into an organic whole. They never made a serious attempt to do so. They only used force and diplomacy to keep them apart from one other. Inspite

of its high aims the Congress has proved weak and ineffective in doing it. It could not even hold the conflicting elements apart and prevent their political mischief and communal quarrels. The Muslim League now wants to separate them.

Thus we find that everybody thinks of improving humanity abroad but not human beings and groups at home. Everyone wants to kill his neighbours and nation at home in order to save his world culture, religion and supremacy abroad. We have lots of theories and claims preached in the country about authority and freedom, but there is no desire to build up continuously real strength and a solid centre of power and unity to achieve them. We are fighting all men, parties, governments and situations with mere negations or protests, escapades and strikes. We want to plant trees of liberty but don't want to shoulder guns.

Our politics for the past twenty years have thus been dominated by fog, rains and hails, where non-violence has been the fog, non-co-operation the rains, and strikes and riots the hails. There has been no real unity behind our movement but squabbling about programs and principles, persons and procedures. Consequently it has become unreal and unstable. There is a great chasm between the government and the country, between people's groups and great individuals. Add to all this secret societies and their influence and public apathy, and the political picture becomes very dark. There is a growing dominance of communal parties. Hence any sense of grievance leads to riots as peaceful agitation seems to have no immediate results. I think that the impossibility of securing and maintaining office makes for a certain unreality in politics. It also makes for sterile and futile extremism.

Then we have a number of political pumps—provincial, rural and urban—who are doing the work of pure extremism. There is also narrow localism and separatism in provinces, states and public institutions. At present ours is not a federal state or a unitary nation-state but a sort of a loose confederal empire with no parliamentary government and no democratic backbones. There is a rooted dislike of democracy. And I think the new Federalism in our politics will inevitably perpetuate our ancient dynastic, provincial and communal localisms. There will be no nation created. We shall have to face first the inevitable religious question and its attendant quarrels and its endless complications in politics. It only makes for permanent religious parties and perpetuates distinctions between

(1) Church and State ideas,

(2) Cultures,

(3) Races,

(4) Educational systems,

(5) Defence and foreign policies; and thus creates and promotes divided and extra-territorial loyalties amongst the discontented. All politics is at present primarily power politics. The idea that force or power is indecent or immoral though widespread in India is an undesirable fallacy. It underlies such phrases as 'the right versus might,' 'soul force versus brute force', 'non-violence versus violence', 'government satanic versus individual divine', 'civil disobedience versus government authority', 'spiritual swaraj versus political swaraj', and so on. I don't think there is any such thing as the struggle of righ tagainst might. There are only struggles in which resistance or force used for ends deemed right is pitted against force used for ends deemed wrong. Therefore we must organise for defence and resistance and be ready to meet the forces of evil rampant in the country and dangers threatening her from abroad. It is no use pretending to sail or fly in a higher atmosphere of non-violence and would-be martyrs and saviours of the world and live at present a life of political inaction or philosophical escapism and avoidance, because the evil or danger has not affected us personally or is considered to be a just and divine punishmentfor our past sins and falls.

The doctrine of absolute and infallible non-violence as an immediate penance for all our ills or world's ills embodies a mischievous incapacity for any kind statecraft. It is a monkish and nunnish virtue in times of conflict and a discipline of renunciation of world, wherein even evil is welcomed as a test and trial for individual soul's advance. Over the whole country hangs the old spectre of foreign rule and a new spectre of foreign invasion and civil war. No doubt they have resulted in increasing our dependence on Britain, and consequently there is a growing hatred of all things British, irrespective of all word-values which are now at stake. There does not seem to be any chance of our country in its mock-heroic mood getting out of this wilderness of political inaction, communal hatred, primitive Pakistan and Civil war. Its apathy however will kill its own energies and will cause it to lose its present opportunities which do not come often.

We hear everywhere through thousand throats cries of liberty, equality and fraternity, but surcharged primarily with the spirit of vanity and atrocity more than that of sanity and security which are absolutely necessary to achieve and to maintain them. We also hear a lot of aims of freedom, of peace

and prosperity, without its basic condition of protection. Our politics therefore to-day suffers from an overdose of the cries for liberty and equality, and from an underdose of a sense of their protection and a consciousness of their defence. The dress of liberty, equality and fraternity sits ill on the vanity, intolerance, cowardice and corruption within us.

You will all agree that Indian politics should have three aims, one of liberation and independance, the second of security and protection, and the third of unity, responsibility and welfare. Instead we find the politics of *denunciation* of powers that be in one case, that of *renunciation* of powers that we have in the second, and that of *pronunciation* of powers that we have not in the third. This is surely a 'Bhakti-Marg' (भक्तिमार्ग) method of a monastery, *denunciation* of worldly life, *renunciation* of personal longings and belongings, and *pronunciation* (prayers) for other-worldly life.

We are only conscious of some sort of power and freedom, but hardly of the conditions and means of security and protection which make them possible, or even of the ends of unity, responsibility and welfare for which they are wanted, and which make them good. Even our conception of power and freedom is growing steadily communal. And we have hardly any defence-consciousness or security-spirit left. We only hear of the slogans of revolution which seems to be the end-all and be-all of our national existence. This has resulted in engendering a belief, so-called vision, that the defeat of those in power by some else will automatically lead to political power (Swaraj) falling into our hands like a ripe (I think rotten) fruit and then we shall be able to maintain our independance as we luckily got it, or to defend our country, our hearts, homes and shrines without any preparation even mental or physical for resistance. Some religious sects will not kill bugs and flies themselves, some of us will not kill animals for food ourselves, but some one else will do these things for us. We thus get the merit for non-violence, and also get relief from bugs and flies and get our non-vegetarian food. It is a very clever piece of logic and way of life to get the best of the both worlds.

India must first have a strong state, a unitary and centralised state, which will levelise all animosities and inequalities under a common rule of law and administration, and then a democratic system of government responsible and representative, where national problems will be considered from the point of view of common welfare and collective security, and not sectional or communal or local considerations and interests.

India must also ally herself to great powers which are for international peace and democracy and not remain aloof and separate. The cry of Pakistan is a result of the onesided desire for communal freedom and power without any desire and sense of national defence and protection and international development. Sections of our community desire freedom and power in particular areas on religious grounds, as if any part of India can be free and defended by depending on others outside and by excluding your neighbours and by tyrannising over them unchecked, and by creating many more similar states, great or small, mutually exclusive, jealous, rival and inimical.

This is all due to not having amongst us a sense of protection and a consciousness of defence organised with the help and good will of our neighbours, but depending on foreign help or divine interference and protection promised to the elect of God. This is an attempt to create new Cities and States of God in India. If this view of life is adopted and preached, then there cannot be only one Pakistan demanded but hundreds of them because India is full of sects, saints and gods whose ideals of religious or spiritual, communal or cultural liberty and liberation, undreamed of and held and proved impracticable and visionary in the past, will generate a thousand forces of anarchy unknown and unknowable by the present self-centred leaders of those ideas and schemes of personal or communal salvation.

There is more evil in the minds of men who want to reconstruct the future by looking backward or upward for political sanctions or sacredness of political life than we think. Most of them feel that they have been dipped in the Holy water of religion and have been transformed, and are now protected by holy gods and ghosts.

We are geographically and politically one and interpenetrated. We are culturally and racially mixed. We are economically interdependant. We are historically intermingled within and separated from without. Mentally however we are getting separated and hostile by our actions and utterances. There is a clever conspiracy going on in India to kill the political future of India. We have in India a great many old and new *barons* with their own *mein kampfs* (my struggles and experiments) and with their *Kultur-kampfs* inundating the country. They have their policies of blood and iron, or strikes and surrenders, and their own storm-troopers and shock-brigades, their green or red shirts, some working clandestinely, some openly. They are preparing for an inevitable civil conflict or civil war which they think is necessary to achieve their own

ideologies and theologies or credologies. At present their moves and countermoves seem to be futile, but surely they are sowing dangerous seeds in the land. They are either engaged in a revolution by import, in many ways ready-made, though there are no raw materials, no engineers and technicians to fit it and to make it a success here. Of course there are a lot of talks and tirades and great pronouncements of new moral virtues and values about it. There are big noses and great noises engaged in their promulgation. How far will the country profit by it is a question disputed amongst themselves. But their nuisance-value is enormous. Amongst them Pakistanis come. Their philosophy is of hatred and intolerance of neighbours and of a holy war against heathens, infidels, and kaffirs. There is amongst them a dream and a scheme of a new puritanist revival of a golden religious age in the past. In separating their lot from that of their neighbours, in rejecting even freedom unless it was accompanied by disruption, they are hastening the ruin of all and playing into the hands of political tyranny and foreign rule in the land. The present international situation does not offer any chance for independent Pakistans of this kind.

Our country is therefore seriously ill. In art, science, religion, ethics, economics and politics there are great dissensions and disruptions. We find a thousand cries and confessions of bewilderment, pessimism and dissatisfaction. Old easy confidence of a decade ago has evaporated. A mental anarchy of muddle and impotence is the keynote of this illness in all spheres. The more the effort at a common outlook, program and ideology, the more it increases contradictory, extreme and absolute but partial views of life.

One view about this crisis is that the old culture is dying because of its inherent contradictions and insufficiency. Its decay is therefore inevitable. Another view is that our illness is due to the desire for seclusion, exclusion and partition, rigidity and bigotry inherent in Indian nature. But the leading note of the common view of our illness is that *man is considered naturally free* by our forwards. And this wrong conception of liberty is the first real cause of the disease in our country and culture. Freedom is the product not merely of instincts but also of social relations and bonds themselves. Freedom lies not in each man or group pursuing his secular interests or spiritual ends independently, but in the actual relations of man to man, of man in duty to man in authority. "The leaders of contemporary culture are still dominated by Rousseau's unhistorical and unsocial belief that man was born free but has enslaved himself in a net of complex social relations,

that the freest man is the most isolated, that what we have to do in order to gain the liberty of the 'natural man' is to unloose all the conscious ties of society to dissolve the community into its original elements."

This conception of freedom is the chieferr or which is at the root of all our confusions. It is a negative individualistic conception of liberty which may have been justified against medieval feudal of religious fetters. It is as such however purely a destructive, anti-social conception in modern social times.

• The *other* cause is that our general life is controlled and ruled by principles of legitimacy and ownership inherited from the past, by our conceptions of social caste, of rights of political conquest, religious conversion and hereditary descent which are all considered sacred and sanctified. Castes and communities, states and estates, services and vested interests are holding our life in an iron-frame and making any social work and political advance impossible.

Thirdly our whole life has now become permeated by a vitiated spirit of commercialism, and by an absolutist conception of private rights, private profits and private property. Their vices have overtaken us. The old virtues of an agricultural communistic civilisation as embodied in our joint family system, in our village and jati panchayats, in our local community co-partnership and co-operation have been rapidly disintegrating and disappearing.

The new commercialisation and its attendant social misery have created a selfish individualism and a class antagonism not heard of before, and an economic unsettlement which has ruined our social ties and have hindered the growth of new national bonds. Consequently no amount of personal example, social suffering or service by the greatest and the best in the land seems to forge the links of a new national or human life for us.

Fourthly, sensate mind dominates our life. Its secular and sense attitude, its love and sex moods, its indecency and eroticism, its materialism, naturalism and nudity, its purely economic motives and ideology, its apology for scoundrels and criminals, profligates and prostitutes, its revolt against duty, its premium on unchastity and unfaithfulness, and its want of faith in personal purity and pride of honour under the name of liberation from the tyranny of moral virtues and legal bonds are its chief characteristics.

This is fundamentally a physiological—sensual interpretation of man which supposes him to be only a victim of

gigantic vices and passions, unbalanced and abnormal, and of economic relations, subnormal and discriminatory.

All this denotes a sterile idealism and an empty erudition and is permeated with an epicurean sensate spirit with no power to make men the great creators and spirits of mankind. In this state of mind rogues and erotic loafers are often defended as the pioneers of freedom and defenders of the poor and innocent people. There is thus an attack on the fundamental values of religion, science, morals, art by a constant stream of ridicule and abuse, slander and satire. There is a revolt against all duties and loyalties. Marital loyalty and family duty are ridiculed and over-thrown. This is a creed of free individuals. This is a revolt against every social convention, against every binding but always in the name of freedom. This is the *new immorality* that some of our forwards want.

Finally, let us see our educational system. I don't feel called upon to dilate upon its academic defects. There are deeper and greater forces at work in our body politic, social and mental, which make the work of any educationist an impossibility. There is a mental apathy and a moral instability and organisational incapacity in all our educational work, atmosphere and aims. We will have to examine the causes more closely.

Our educational system is vitiated by conflicting aims—the dominating one of the government and the excluded one of the nationalist and the liberal. Our teachers are either loyally and energetically but extravagantly merged into the system as existing and are apathetic and idle or have no scope for giving inspiration and a new turn to our students' minds and activities.

Our students either feel themselves forlorn and frustrated because there is no scope for their merits, ideals and career, or are precociously dissatisfied with any sort of education and prematurely dissipated by extra-mural and extra-curricular activities. They do not seem to be in search of a disciplined mind and an acquisition of integrated power developed by devotion to study and by concentration on thought and work.

The spirit of '*Lazarronis*' is on them, born-allies of ignorance, idleness and bigotry. They lead an unreal Epicurean life. If this process continues our educational centres are likely to become a kind of intellectual hell where spirit of ignorance, prejudice, indulgence and a sort of mild vagabondism would prevail, where advanced learning would be at a discount, where one would feel bruised all over morally, physically and

intellectually, leading to an intellectual paralysis in the head, a moral cold in the heart, and a physical wreckage all over the body; where we may also see increasing an imperialism of youth and ignorance whose intimidation of authorities and professors by strikes, hooliganism and wanton mischief may become more common or normal. Unless we develop a respect for real learning and a liking for constructive virtues and values of life and for noble characters, our decline is sure. I only find at present youngmen's morbid sensitiveness for their own natural freedom. They possess more regard for the dramatic and sensational in life. Their politics is full of one-man values. It is of the drawing-room and market-place. There is no masculine virtue, no democratic fibre, no human toleration. Its nature is more dreamy and less practical and therefore it is helpless. "Dress it how you like, it will run away all the same," when crisis will come and endanger our security. It may create many typewriter politicians and tacticians, political pedants and conjurors but not necessarily patriots.

I now turn to world politics. The world is at present divided into a number of encirclements. Britain and Russia encircle German Europe, Germany and Japan encircle Russia, Russia and America encircle Japan. America and Britain alone are not encircled but they are endangered.

We are willy or nilly drawn into the world-current. It will not do for us to close our eyes and remain in dark, or to open them only for divine visions, and to put our trust for our present and future welfare and security on the benevolence of some God or in the inherent and infallible efficacy of determinisim of some moral principle or dialectical law not accepted by active humanity and untraceable in recorded history.

International affairs are always governed by practical and selfish considerations. To-day every state claims to be a final judge in its disputes (Power politics). The only arbiter is therefore considered to be force. Hence there is an utter collapse of democracy in the new Europe. The indefeasible soverignty of one nation-state is the heresy and danger which threaten Europe in her affairs. Then what forces will bring about a new world unity and order? Can Imperialism do it, or is its role ended or is it the only way? Can democratic process do it, and is it to be by consent and compromise before or after defeat?

A new world order can be brought about by common consent after defeat by a League of States, or by common consent before defeat by a Federation of the world, or by force after defeat by a superstate or a few large regional orders. The

present international situation as well as the trend of events are full of promise to some schemes and forebodings to others. It has no doubt a number of possibilities in its womb. The art of world leaders will however lie in making one of them which is desirable and necessary the inevitable in the larger interests of humanity and its future. The effects of the present world war amongst the five great powers who control the world will be great. These seem to want to eliminate one another or only some by establishing their predominance in a new world order of their own make and choice and under their final control. In this new world order there will still remain principles of old balance of power and nation-state, and old imperialisms working against new imperialisms of new races, states and creeds, unless one power succeeds over all others. No one can say which will succeed. But for a world order if it is to be established, one power or one system of powers alone ought to succeed and dominate finally. It cannot be created out of conflicting ideologies and credologies by any procedure of consent or round-table methods, or maintained by any new League or Federation of nations, but only by the creation of a super-state which will unite and dominate others, and then work for common welfare.

I don't however think a new world order can be at all established to-day either by consent or force. The forces of good and evil are evenly balanced in each country great or small. No one state or a set of them can claim the monopoly of good life and noble aims historically or contemporarily. The cry may be good but the talk is vain and misleading.

Moreover, we are not agreed upon what type of world revolution and order we want. Is it to be political and democratic, or social and economic also, or something religious and spiritual to boot ?

I don't think the world forces indicate the coming or rushing of a Swaraj to us. We have become or been made too weak, too disorganised, too sectarian and too quarrelsome for such an happy event in the near future. We will not be able to get or maintain it under the present spirit and force of times. Our demands may be just and democratic but we are weak and inefficient. Democracy though just is inefficient. Dictatorship though efficient is unjust. Socialism though just seems neither justifiable nor efficient at this stage of her and our evolution. The nationalism of small states and groups and colonialism of great powers and empires are the roots of the present international anarchy. And the conceptions of

absolute sovereignty and equality are the fruits of that anarchy. It has left no will to peace and toleration, but created a desire for more power, conquest and domination. It has endangered the security of weak and small states. This will to dominate, this demand for complete surrender and subordination, and the lack of any accepted moral standards in international life have increased that anarchy and are responsible for the confusion, disorder and exasperation of our times.

Without some basis of collective security and common welfare and aspirations no international society can be created or can come into existence and without some framework of complete sovereignty of a central world government it cannot be maintained.

To-day nations are fighting like feudal classes not for common liberty but for unequal liberties, not for one world order but for separate regional orders. I personally think that common liberty and order under one rule of law has to be imposed on the warring nations before it will be agreed upon to by some small rival groups. This work has to be done by one great power. Which one will do it and when it will be done, future history can alone tell. But it does not seem at present to be so practicable proposition. It is premature. Human life as organised in groups or sects has to make a great leeway before it can rise higher and become divine and peaceful. Then there would be "peace in peace itself" as Yajurveda declares. India is there but we want it to be united and independent, strong and efficient, happy and prosperous. But there are no Indians. For this we have to go through the process of a greater historical awakening and moral co-operation, and a sort of dominance and dictatorship of a strong centralised but liberal government. Let us not be carried away by slogans of a world-revolution or world-order to-day. There will always be a world disorder, a grand unfinish at the top of humanity and culture. Let us not be exclusive or absolutist, dogmatic or sensate. Let us not use exaggerated and extreme language of partisanship and excite devotion for our one-sided theories, and passion against those of others. There is no such thing as an inevitable and absolute doctrine or future of mankind. It is purely wishful thinking at present.

RABINDRANATH TAGORE.

P. NAGARAJA RAO, M.A.

Rabindranath combined in himself three distinct roles—that of a poet, a philosopher and a patriot. His influence on Indian culture and thought is second only to that of Mahatma Gandhi. He is one of those pioneers of Renaiscent India who by the sheer effort of his genius, spiritual insight, and moral earnestness caught the imagination of the East as well as of the West and held the loyalty of every self-respecting patriotic Indian. For us he has left behind him not only an intellectual heritage in his works, but a great educational institution which he built with his own hands. That was his abode of Peace (śāntineketan) to the end of his life.

Bengal was in the midst of a cultural Renaissance at the time of Tagore's birth (1861). Three different factors had tremendous influence on the life of the poet. A type of non-dominational and liberal interpretation of the Hindu scriptures was attempted with great success by Raja Ram Mohan Roy. He did not believe in the sectarian exposition of *śāstras*, which culminated in crude theisms. Such crude religions, were in his opinion the cause of all the factions in India and all over the world. The religion of Rammohun held that God is one and that, neither Mahammad, nor Krishna or Christ is the sole Prophet of the Lord. It is this spiritual discernment that is setforth in words on the doors of the Tagores. It runs thus:—"In this place no image is to be adored and no man's faith dispised". Ram Mohan cleansed Hinduism of all its oddities and grovelling superstitions. He restored what is vital, in it by destroying the anti-social tendencies that had got mixed up with it. Tagore embraced this Neo-Hinduism and his father Maharishi Devendranath was a great adherent of this school of thought. This non-conformist attitude was not without its difficulties. The Tagores suffered social ostracism for their apparent heretical views. The poet thoroughly enjoyed the benefits of being an outcaste.

The general rules of human conduct have been divised only for the ordinary men. Conventional morality and customary propriety are the things that help average men. For the great ones they are a law unto themselves. The greatmen of the world have always been non-conformists. Jesus did not conform to the Hebrew ways nor did Gautama the Buddha to the ways of the ritualistic Brahmins. So there is nothing unusual in

that, that Tagore at school did not take his lessons very seriously and did not believe in the efficacy or the utility of examinations. He was a highly sensitive, poetic, youth.

The second influence that shaped Tagore's life was the literary revolution, inaugurated by Bankim Chandra Chatterji. He was the pioneer of the "romantic movement" in Bengalee literature. He broke new ground and fought against the orthodox forms of poetic composition. He liberated the creative artists from the dominence and tyranny of ancient forms. He unloosened the clips on the imaginative wings of the young literary artists of Bengal. Tagore took considerable advantage of this romantic movement. In the early years of his boyhood he read Vidyapati and Chandidas. Later on he took to his own way of writing. This was very much resented by the orthodox literary men of Bengal. It is stated that passages from Tagore's work were given in examinations to be rewritten into standard Bengalee. The poet had to struggle hard before he was accepted by his men. The poet concludes this phase of his life thus "my ignorance (of English) combined with my heresy turned me into a literary outlaw."

The third factor that influenced Tagore's life was *nationalism*. The early effects of English education blinded men to all that is good in India. They became abject slaves to western ways of life. It did not stop with this but expressed itself in a violent hatred of all that is Indian. They equated civilisation with the English. To be unenglish was to be Barbarians. The top hat and the tail coat came to stay as the symbols of a gentleman. In the words of the poet "these men divided good and bad according to the hemispheres to which they belonged." Nationalism counter-acted this and debunked this over-seas-complex and laid the foundations for a discriminate borrowing from the west. Nationalism in short indicated that India had a civilisation all its own and that Indians were not African Hottentots without any trace of culture before the British impact. The National movement produced this awareness. Tagore was pre-eminently an Indian in his spiritual outlook. He was inspired by no exotic genius but by the upanishadic rishis of India. He preached their message, saw the vision they intiuited and set them to sweet music.

Tagore's religion was that of a poet.[1] Imagination and sympathy were the methods of his art. He was a great Nature

[1] Cf. *Contemporary Indian Philosophy;* Edited by S. Radhakrishnan and J.H. Muirhead. The *Religion of an Artist,* p. 25-46.

worshipper and conceived Nature as the open book of knowledge To him creation was the expression of the Lord's joy. Creation is the *līlā* (sport) of the Lord. The supreme aim of his poetry "was to express the fullness of life, in all its beauty and perfection. He did not reject life nor did he depict it in black colours. Life was something sacred and mysterious to him. The whole universe with its fine colours and men was to him not a mechanical cohesion of forces but the result of the spontaneous creative power of the Lord. He felt with Wordsworth "that every common bush is afire with God" and to him "the meanest flowers gave thoughts that lie often too deep for tears" He believed in the elementary passions and sufferings of the pesant who was nearest to the soil and not in the sophisticated intellectual. He loved to play with children to the end of his life. "Heaven lies about us in our infancy." His love of Nature was so great that often times one had to identify him as a Pantheist. To him the Lord was a supreme Personality, all love and toiling for mankind. He believed that the worship of the Lord consisted not in a world-negating ideal, but in active self-sacrifice and service. He was up against those who treat *saṁsāra* as a thing from which one has to escape. He accepted *saṁsāra* and treated it with the spirit of a *karmayogin* "as a succession of spiritual opportunities." He admonished his friend

> "Leave this chanting singing and telling of beads whom dost thou worship in the dark corner of this lonely temple with doors all shut? Open thy eyes and see thy God is not before thee; He is there where the tiller is tilling the hard ground and where the path maker is breaking stones; he is with them in sun and shower, and His garment is covered with dust. Put off they holy mantle and even like Him come down on the dusty soil. Deliverance, where is this deliverance to be found? Our Master Himself has joyfully taken upon Him the bond of creation. He is bound with us all for ever; come out of thy meditations and leave aside thy flowers and incense. What harm is there if thy clothes become tattered? Meet him and stand by Him in toil and in the sweat of thy brow."[2]

The God of Tagore though he worked amidst fellow beings does not need man's co-operation to perfect Himself as Wells' God. Nor is Tagore's God the Big brother of men as William James conceived. Tagore conception of God was that of the

[2] *Gitanjali* verse 11.

inner ruler (antaryāmin) of the hearts of men. He realised the unity of creation not through the intellectual staircase but through the slides of intuition. He believed that artistic creation is the result of insight and is not to be found at the end of a syllogism. He distrusted the capacity of intellect to scale heights which imagination could. His intuition was not anti-intellectual. It was 'intellect in the most exalted mood.' He did not passively accept the religion he was born in, nor was he hastened into the Philosophy of Vedānta. But he accepted the grand truths of the upanishadic seers after having had their visions himself first hand.

The central truth of Vedānta cannot be experienced by a mere intellectual training. It requires the treading of the path of mysticism. Tagore was a mystic who felt on his pulse the truth of Vedānta. In a famous letter John Keats propounds his doctrine of poetry. He says that great achievements in the field of poetry is due to the practice of what he calls *negative capability.* i.e. "when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason remaining content with half truths, and identifying himself with the object. With the great poets the sense of beauty overcomes every other consideration, or rather obliterates all other considerations." Keats held the view that Shakespeare possessed enormously this quality of "negative capability." Tagore the Vedāntin that he was, practised this faculty. Negativeing one's personality leads in some cases to the attitude of an abject *bhakta* and at other times *it leads* to the equation of the *Ātman* with Brahman "*that thou art,*" after the manner of Śaṅkara.

Tagore fought against the forces of industrial civilisation. In many a lecture he has given us frightening portraits of the prospects of an industrial civilisation. He denounced the use of the scientific power in the service of anti-social ends. He stood for the cherishing of the values of life and never wanted science to play the subservient role to the wicked ends proposed by greedy powers. He wanted men to harness the power scientific civilisation has endowed them with to great human ends. "Man," he said "should realise that this world is not a store house of mechanical power, but a habitation of man's soul, with its eternal music and beauty and its light of divine presence." The poet realised that man was a creature with a dual status. Man always lives on the border-land with animal desires and spiritual yearnings. So he exhorted men to make the spiritual yearning in them stronger and stronger. As to

how poetry and art can liberate men is set forth in great detail with copions and moving imagery in the Hibbert Lectures of the Poet, "*The Religion of Man.*" All through his works he refused to treat the world of plurality as an illusion to be dreaded. He wanted that our consciousness should assimilate all that is in Nature and in the world around us, and feel the oneness of God through devotion and service. The poet has repeatedly told us that his ideal was to feel with the strength of his entire being the truth of the first *mantra* of Īśa Upaniṣad "Know everything that there is in this universe as enveloped by God. Enjoy whatever is given by Him, and harbour not in your mind the greed for the wealth which is not your own." Not to be cheerful is to be ungrateful to the Lord, the creator of the Universe.

This message of the forest seers is what the world of to-day needs. A self-sufficient humanism which believes in the un-unrestricted use of the scientifically perfected instruments of destruction in order to satisfy their respective primitive lust for dominions should need know a way of life lived and taught by the upaniṣadic seers. It was a way of life that did not believe in aggression, or active reason, but believed in peace. It is these peace-establishing traits that account for the continuity and the strong instict for life characteristic of Indian culture. The seers of the upaniṣads believed in a stable order of society sustained by *dharma*, which respected the individual as of the greatest consequence in life. They did not believe in the accumulation of the means of living, but believed in the quality of the life lived. The strange vitality of Indian Culture is due to its assimilation of all that is best around it and at the same time maintaining its personal identity. Tagore with all his knowledge of the west found that mere intellectualism cannot take us for into regions of the spirit. The intellect is just like a blade that cuts both ways.. Intellect can make clear what is known by a trans-intellectual process. The very postulation of an undivided and ultimate Reality, Brahman, declares the non-competence of intellect to know it, because intellect can only work in the realm of the many. Intellect pre-supposes the relational type of knowledge. The poet tried the method of *anubhava* (experience) and realised the infinite. Tagore deviated from traditional vedānta in that he emphasised the need to sublimate all that is in the world into *Ātman* and did not treat them as illusions. He never said like some traditional Advaita thinkers that the world of plurality gets sublated or annulled at the time of Brahman realisation. Prof. S. Radhakrishnan interprets the philosophy of Tagore from this

standpoint with profuse quotation from the author. In the words of the poet "in the rushing stream sounds the joyful assurance 'I shall become the sea'."

The desire for the realisation of the infinite is not an acquisition of anything external. Gaining anything in the world is by its very nature partial and it is limited only to a particular want. But *being* the infinite is complete and it belongs to wholeness. That is why Brahman is said to be "*anbhavaika gamya*" (can be realised only through experience). It is this experience that makes men feel the truth that "humanity is one". When this truth is felt on our pulse we get the necessary zeal for reform. A second hand realisation of this truth does not make us effective savants. To know that I must treat my neighbour as myself is not enough to egg me on to love my neighbour. Unless I feel that I and my neighbour are not two different men I can not love my neighbour effecetively. To know the good and pursue the evil has been, the all too common characteristic of mankind. It is this spiritual realisation that gives us the will power to translate our knowledge into action.

Such a realisation convinces us of the truth of the statement "that there can be no happiness for any of us until it is won for all." It is from the realisation of the indivisible nature of the infinite you come to the doctrine of the indivisibility of human happiness.

For a very long time in his life Tagore abhored the cult of Nationalism. He knew with greater clarity than any European savant that the cult of nationalism necessarily leads on the nation to imperialism. He saw that the Nation-State had become the Moloch of the modern world at whose alters are sacrificed beauty, truth, happiness, and life itself. So he became a powerful Prophet of the religion of Humanity and the cult of internationalism. While subscribing to the creed of internationalism he was not blind to the defects of the League. He knew how the interest of particular groups stood in the way of the effective functioning of the league. He also felt that the statesman who met at Geneva met there not as 'cosmopolitan men but as national agent competing with one another. Their parish was London, Paris etc. but never the world. Tagore pointed out to the west, to the point of pain that 'primitive lust for dominions should give place to a civilised standard of values. He loved the 'Little England' of the Poets, Shakespeare and Shelley, the England of Keats and Wordsworth. He echoed the sentiment of Burke 'Little minds and great

empire ill go together.' Denial of Freedom abroad, sooner or later leads to its denial at home. For some time Tagore remained neutral and expected that England would do her duty. He envisaged before the civilised world that India which represents the ultimate East and England which represents the best in Europe should both live in a political system whose keynote must not be domination, but must be one of equality and freedom. Membership in the British common wealth remained only an aspiration with India. The extreme section among the Nationalists stood for severence from the British. Tagore did not closely associate himself with them. But after the Punjab disturbances at Amritsar Tagore resigned his Knighthood as a mark of protest against British action in Punjab. Since then he veered round the view of the Nationalists. He found that a facile internationalism lead one nowhere, and since then he has proved an uncertain convert to the cult to internationalism. His final political testament to India was his spirited reply to Miss Rathbone when she blamed India for not actively helping England in her war effort. His message to the modern world was "Trust India" and his message to the India was 'become a free nation.' His aspiration is echoed in the following immortal lines of the Gitanjali.

"Where the mind is without fear and the head is held high; where knowledge is free, where the world has not been broken up into fragments by narrow domestic walls :

"Where words come out from the depth of truth, where tireless striving streches its arms towards perfection, where the clear stream of a reason has not lost its way into the dreary desert sand of dead habit; where the mind is led forward by thee into ever widering thought and action

"Into that heaven of freedom, my father, let my country awake."

To achieve this for our country the oldest scripture Rigveda asks us,

"संगच्छध्वं, संवदध्वं, संवोमनांसि जानतात् समानो मन्त्रसमितिस्समानी ।
समाधं मनस्सह चित्तमेषां समानं मन्त्रमथिमन्त्र मेवः, समानेन वोहविष जुहोमि"

"Come together, speak in harmony, may your minds see alike. Become one conclave, deliberate as one body and let your minds and thoughts be concordant. I invoke you all together, I worship you all with equal offerings."

CAN LIBRARIES HELP DEMOCRACY?

C. G. VISWANATHAN, B.A., Dip.F.L.A. (Lond.)

Democracy and freedom can only be saved, if a lesson is learnt from the gradual transformation of the Totalitarian states, where Dictatorship is the guiding force. Many of the modern dictatorship countries began with a form of Democracy and it degenerated into the present form. What are its causes? Simply, it is but the failure of the society to cope up with the changing situation resulting in its acceptance of the dictatorial system. No doubt the economic and political blunders of the community were primarily to blame but none can deny the absence of mental resistance responsible to a great extent in this break down. The educational system in those countries was unfitted for mass education and the adults after school age were abandoned by society without any control. The shrewd dictator with love of power, used the youth of the country to achieve his object.

India is now engaged in a struggle for self-determination. Ultimately if a democratic government is to hail on our country is it socially fitted and ready to shoulder the responsibility? An unqualified yes as answer will be to go astray from truth. Can India learn a lesson by careful observation of the experiments in educational system conducted in various countries in the West and the United States. This spontaneous movement has risen from social and educational groups of the community and never sponsored by the government. As such the first concern of our society is to tackle the methods to educate our nation for democracy. This attempt cannot proceed far without being confronted with the problem of mass education. Mass education in India is practically absent.

It is extremely sad to see the low percentage of literacy of our population as revealed by the last Census. The 1941 Census is not likely to give us an appreciable increase. It is high time that our society makes up its mind to start a scheme of mass education to prepare the community to partake of the fruits of democracy. Unless mass education is given India will not only be unfit to play its part in a democratic government but it will not realise its goal of independence.

There are several agencies through which this work can be done. But I am concerned with how libraries can help mass education and ultimately save the democracies from disintegration. Among powerful and successful agencies in the field of adult education, such as the Press, the Motion-picture and the Radio, the Public library is certainly one which reaches far down into the masses. The public library is a popular institution, primarily charged with an educational obligation. But how far can it fulfil its duty? Even in United States where the library service to its citizens is said to be second to none, one third of the population has no library service at all, while one third has poor library service. Of the remaining population which has full facilities, only 30% of the people are registered borrowers. Now, what can be said of India which has no public library system at all. The scattered and small number of public libraries existing in India are so poorly equipped for fulfilment of their duty. Poverty and indifference of the State is to a large extent responsible for the present unsatisfactory condition of these popular institutions.

The public library is a plain man's institution, full of democratic atmosphere, where one's point of view is respected and where one can think freely on any topic without being apologetic. In order to be a living force in the advancement of mass education, the public library requires new techniques and standards. In addition to its stock of books it needs to supplement with the newspaper, magazine, radio and motion picture. Books are seldom written to appeal to the masses and invariably costlier than newspapers and pamphlets. Books are of little value in a library, especially in a public library with poor book-fund, if they do not find readers. In order to rouse the interest of the masses to take to books, provision of light literature and recreation in the first place is essential. The ultimate object of the library is informal education and it has been appropriately said that the public library is a continuation school for adults after they leave the high school and college.

If the public libraries in our country are planned and established in the right direction, it will be the first step towards mass education. Every man and woman will easily realise the need and value of democracy, in which the dignity and freedom of the individual is ensured. But if there is no public library system or if there is only a haphazard and poor one, not only mass education will be failure but these popular institutions will degenerate into propaganda agencies as in the totalitarian states.

In order to promote democracy, the public library should be sufficiently democratic in its personnel and service. The board of committee of management of public libraries, should consist of representatives of all sections of the community it serves. It should not be filled up with retired professors, lawyers and capitalists, obsessed by partisan feelings, who have made sufficient money to last for generations and have no more interest in the public nor in the library. Prof. Joeckel's *Government of the American public library* gives us the good and sane advice. He insists that it would be wise to have a heterogenous board to give full representation to the entire community. All interests will have been satisfied and safe-guarded. No majority and minority problems will arise to spoil the good work. If the public library functions properly it will surely enlighten the masses to think and learn for themselves in the right direction. The idea of a public library is itself democratic and its location and functioning in every town and village will rouse the desire of the people to be able to use it to advantage and thereby get themselves educated. It is the total ignorance of the masses that is largely responsible for the political and economic ills of our country. When the masses will be educated, they cannot be led like dumb sheep. Out of nearly 40 million people of our country about 75% do not know how they are governed and why starvation faces them in day-to-day life. To make them understand the situation and to think and act for themselves they need to be educated. The public and rural libraries will prove one of the best agencies towards mass education in our country.

Looking at countries which have public library systems, working successfully, one can learn that the idea of a public library originated from the working classes. In Great Britain the origin of the public library is the Mechanics' Institutes. Public libraries prosperously thrive in the United States because of the munificence of Andrew Carneige and because of the sanity and enthusiasm of the Americans who utilized the offer to the best advantage of the community. It can be seen that in both the countries the scheme of a public library system originated with the common man, who subsequently got from the state certain facilities in the form of public library legislation.

It is hoped that India too will not lack in such enterprise either from the common man or the wealthy capitalist.

A sucessful attempt to establish a public library system, will no doubt result in an increase of the percentage of literacy

among our citizens. A literate citizen is an asset to a state and it is only an educated community that can run Democracy, both limited and unlimited.

It can be seen that libraries are indispensable cultural agencies, with a dynamic power to broaden the vision of men and women and make them think fearlessly, clearly and constructively. This really meaus training the minds of our readers, so that they can emerge out from the mass of confused propaganda, and judge independently the right from the wrong.

In the present confused state of the world, librarians and libraries have the greatest responsibility to endow the readers with real ability to know the creed of Democracy as opposed to the creed of Nazism.

SOME ASPECTS OF "OIL MINING" IN INDIA

A. NANDY, B. Sc. (Hons., Glasgow), C.P.E. (Glas.)

The importance of oil mining during the present moment is well known to all of us. The crude oil which we get from the bottom of the earth is called petroleum which when refined gives us the following products :—

> Petrol, benzene, fuel oils, lubricating oils, kerosine, grease, paraffin wax (for candles) etc. all of which have very great commercial utility.

Chemists hold that the interior of the earth is made of metallic carbide and the deep seated water acting upon it produced petroleum which was brought up to the surface by gas action. This theory does not seem to be correct. If the oil come from interior it should be found mostly in old rocks and be rare in new rocks. The reverse is the case. Oil is not found in the ancient rocks of the earth's crust. In India, almost the whole of the output of oil is obtained from the recent rock formations. Most authorities now agree that the mineral oil is an organic product formed inside the earth due to slow distillation of buried animal and vegetable remains by heat and pressure. The constant association of fish with oil has led Mr. Macfarlene to suggest that fish is the only source of mineral oil. The quick accumulation of thick masses rich in organic material is most likely to lead to a prolific oil field.

The total production of petroleum in the Indian Empire during the five year period 1929 to 1933 was the largest in the history of the industry, and exceeded that of—the preceding quinquennium by some 85 million gallons. The average annual production was about 307 million gallons valued at about 5½ crores of rupees.

The world's production of petroleum reached its peak in 1929 when it attained a total of over 206 million metric tons.

India contributes only a very small proportion of world's supply. In 1929, India stood 11th on the list of petroleum producing countries of the world; but in 1930 she was over-

taken by Trinidad and remained 12th for the remainder of the period, her contribution to the world total being only 0.6 per cent. The three major contributors continued to be the U.S.A., Russia, and Venezuela. In 1928, the U.S.A. were producing 67 per cent. of the world's total. In 1928, Russia stood 3rd on the list with 6.3 per cent. of the total but her percentage contribution increased to a peak of 12 per cent. in 1931 when she displaced Venezuela. Venezuela was producing 8.6% of the world's total in 1928. In 1933 her contribution was estimated to be 9%. The estimated percentage totals for 1933 of the other major petroleum countries on the list are :—

> Romania 3.7 per cent.; Persia 3.7 per cent.; Mexico 2.6 per cent.; Dutch East Indies 2.6 per cent.; Argentine 1 per cent.; Columbia .9 per cent.; Peru. .9 per cent. and Trinidad .7 per cent. Persia has a very large reserves and would ultimately prove more important than Romania.

The consumption of oil in many forms is rapidly increasing in India and deficient home supplies have been met by the importation of foreign oils, which in five years ending 1933 totalled over 228 million gallons per annum. The chief sources are Persia and the United States of America, though Borneo and Russia also contribute substantially to the total.

Indian oil exports have dwindled of recent years to a comparatively small figure, consisting mainly of heavy oils shipped to the Straits Settlements and Ceylon. The export of Paraffin wax, however, is a most important article of Commerce, and for the 5 years ending 1933 averaged 54,600 tons annually, valued at 2½ crores of rupees. Indian paraffin wax has a very wide distribution and is sent to most parts of the British Empire, to many countries in Europe and America as well as to China and Japan. It is rather surprising that India also imports this substance from the United States of America.

During the period from 1929 to 1933 active oil Mining in India was carried on in Burma, Assam and Punjab. Burma alone contributed more than 81% of India's total, Assam contributed 15% and Punjab about 3%.

With the separation of Burma from the Indian Empire our oil resources have been limited. In all places in India oil occurs in Tertiary strata and in anticlinal structure.

In Burma, Yenangyaung is the richest oil field which lies some two miles east of the Irrawaddy in the Magwe district. It is an elongated dome of Pegu rocks. The Yenangyaung field maintained its reputation of being one of the most wonderful oil fields of the world. The field is chiefly remarkable for its long life and the high concentration of oil per acre. A primitive form of oil mining was practised here for centuries by the Burmese who used to sink narrow timbered shafts to sands at depths of from 200 to 400 feet and bale the oil from them. Modern exploitation dates from 1887 when the Burma Oil Co. Ltd. commenced drilling at Khodaung, the Central area. In 1930, the discovery, at a depth of about 4000 feet of an oil sand in the south of the field has led to the exploration of an area at one time considered valueless. There are over 3000 producing oil wells on the field, some of which are operated under suction. From the commencement of drilling in 1887 to the end of 1932, over 4,800 million gallons have been taken from the Yenangyaung field alone.

The most important accumulation of petroleum in Assam are concentrated in three regions: in the Lakhimpur district in Upper Assam; in the Surma valley in Cachar; and in the Arakan Islands. The Digboi field in Lakhimpur district is the most important oil mining centre in Assam. It was first bored in 1888 but it was not until 1892 that production was recorded. In 1921 the Burma Oil Co. Ltd., took over the technical management of the Assam Oil Co. Ltd. and this has led to a steady expansion of the production which reached 54 million gallons in 1932. The field has now proved for a length of 2½ miles and includes the Digboi, Bappapung and Hanspung areas, all of which lie on an asymmetric anticlines with a steepy faulted northern flank. The total recorded production is over 374 million gallons. The crude oil is distilled in a refinery plant close to the field. Adequate supplies of crude oil for this plant are now assured from the Digboi field for many years to come.

In the Punjab and Baluchistan there are numerous indications of the presence of petroleum but often either the structure is so compressed as to prevent the accumulation of large deposits or the petroliferous horizons have been deeply eroded. Several promising structures have been carefully tested, but the Khaur field remains the only source of commercial production. In structure, the Khaur field is an elongated, slightly asymmetric dome. The oil is thought to have originated in Eocene rocks and to have migrated upwards into the Younger Murree beds above. The Khaur field was first developed in 1915 but pro-

duction was small until 1922. In that year the Attock Oil Company's refinery was opened at Rawalpindi and production rose to over 7 million gallons. A peak production of over 19 million gallons was reached in 1929 but fell in the following year to 8 million gallons. Since then production has declined steadily and in 1933 only about 4 million gallons were obtained.

Systematic prospecting work for economic minerals has not yet been undertaken in India. There are vast areas of land in India where no mining engineers have yet gone for prospecting work. Extensive prospecting work for oil should be undertaken at the present moment when there is demand for oil all over the world. Agarthala State in East Bengal was prospected by a mining engineer and oil has been found in that state. It is my firm belief that oil will be found in many of the Native States in India if they are properly prospected. 85 per cent. of the oil wells in India sunk on geological advice had been successful.

Great quantities of natural gas, consisting chiefly of methane, with smaller amounts of other hydrocarbons, occur associated with petroleum in various oil fields of the Indian Empire and until comparatively recent times vast volumes of it were wasted. It is now realised that the pressure under which oil and gas exist in sand, together with the amount of gas actually dissolved in the oil itself, are very potent factors in the recovery of the oil, for it is the propulsive power of the gas which carries the oil to the well and helps to raise it there. Modern oil Mining Engineers will therefore try to prevent the escape of gas as far as possible. In 1931 over 2 million gallons of natural gasoline were extracted from gases liberated on the Yenangyaung oil field alone. The dry gas is used for fuel purposes and produces the electric power which supplies the major oil fields with energy. In some countries these natural gases obtained from oil fields are piped for long distances to industrial centres for heating, domestic and power purposes ; in the United States of America they are further exploited as a source of helium, the non-inflamable gas used for filling airships.

The geological conditions essential to a great oil field are first the presence of sedimentary rocks, with or without igneous rocks. Second, the presence of beds, such as sand, sandstone, or jointed limestone, which contain sufficient pores or other spaces to hold a considerable supply of oil. Third, the absence of extensive metamorphism later than the date of the possible oil producing bed. Fourth, local material rich in organic matter.

Fifth, an impermeable cover to prevent the oil escaping at the surface. Sixth, water condition favourable to the concentration of oil into pools. Seventh, suitable geological structures for the beds to act as oil reservoirs. Large areas of earth can be dismissed as unlikely to yield oil, such as great bulk of plutonic rocks, areas of regional metamorphism and volcanic fields. Oil is found in different geological structures but most favourable is the anticline or dome-shaped structure. In India almost all our oil is obtained from anticlinal structures. On the surface one may see the seepages of gas and oil. Mud volcanoes which are oil springs with mud escaping from rocks give very hopeful indication of oil under-ground. A petroliferous sandstone may indicate an under-ground oil supply. The oil sandstone at the surface may give no sign of oil but freshly broken surface have a fetid odour. Salt beds and sulphur often give indications of oil fields. Where oil escapes from underlying rock to surface waxes and pitches are found in filling the joints, cracks, etc. Geophysical methods of prospecting have been of great use in prospecting for oil in India.

A CLASS OF KERNELS

B. MOHAN, M.A., Ph.D.

I will say that a function is S_ν if it is self-Reciprocal for J_ν transforms. For $S_{\frac{1}{2}}$ and $S_{-\frac{1}{2}}$ I will write S_s and S_c respectively.

In 1932 I (3) proved the following theorem :

If $f(x)$ is S_μ, the function

$$g(x) = \int_0^\infty P(xy) f(y)\, dy$$

is S_ν provided that

$$P(x) = \frac{1}{2\pi i} \int_{k-i\infty}^{k+i\infty} 2^s \mu\left(\tfrac{1}{4}+\tfrac{1}{2}\mu+\tfrac{1}{2}s\right) \mu\left(\tfrac{1}{4}+\tfrac{1}{2}\nu+\tfrac{1}{2}s\right) \lambda(s)\, x^{-s} ds,$$

where $o < k < 1$

and $\lambda(s) = \lambda(1-s)$.

I will, for brevity, express this theorem in the following words :

The kernel $P(x)$ transforms S_μ into S_ν.

Many such kernels have been given by Bailey (1), Hardy and Titchmarsh (2) and the present writer (3—6). The object of this note is to present the more important of these kernels in a concise, tabular form for ready reference. Kernels of a sufficiently general character are given separately even though they may fall as particular cases under still more general kernels.

	The kernel	transforms	into	for
I.	$x^{-\frac{1}{2}}$	S_μ	S_ν	$R(\mu) > -1$, $R(\nu) > -1$.
II.	$\dfrac{e^{-\sqrt{2x+a^2}}}{\sqrt{2x+a^2}}$	$S_s\ (S_c)$	$S_c\ (S_s)$	$a > o$

III.	$\dfrac{\cos(a\sqrt{2x-a^2})}{\sqrt{2x-a^2}}$ $\left(x>\dfrac{a^2}{2}>o\right)$			
	o $\left(o<x<\dfrac{a^2}{2}\right)$	$S_s\ (S_c)$	$S_c\ (S_s)$	
IV.	$x^{\frac{1}{2}(\mu+\nu+1)}k_{\frac{1}{2}(\nu-\mu)}(x)$	S_μ	S_ν	$R(\mu)>-1$, $R(\nu)>-1$
V.	$x^{\nu+\frac{1}{2}}K_o(x)$	S_ν	S_ν	$R(\nu)>-1$
	(i) $K_o(x)$	S_c	S_c	
	(ii) $x\,K_o(x)$	S_s	S_s	
VI.	$x^{\nu-\frac{1}{2}}e^{-x}$	$S_{\nu-1}$	S_ν	$R(\nu)>o$
	(i) e^{-x}	$S_s\ (S_c)$	$S_c\ (S_s)$	
	(ii) $\sqrt{x}\,e^{-x}$	S_o	S_1	
	(iii) $x\,e^{-x}$	S_s	$S_{\frac{3}{2}}$	
VII.	$x^{\frac{1}{2}(\mu-\nu+1)}J_{\frac{1}{2}(\mu+\nu)}(x)$	S_μ	S_ν	$R(\mu)>-1$, $R(\nu)>-1$
VIII.	$x^{\frac{1}{2}(\nu-\mu+1)}J_{\frac{1}{2}(\mu+\nu)}(x)$	S_μ	S_ν	$R(\mu)>-1$, $R(\nu)>-1$
IX.	$x^{\nu-\frac{1}{2}}\sin x$	$S_{1-\nu}$	S_ν	$-1<R(\nu)<2$
	$\dfrac{\sin x}{\sqrt{x}}$	S_o	S_1	
X.	$x^{\nu+\frac{1}{2}}\cos x$	$S_{-\nu-1}$	S_ν	$-1<R(\nu)<o$
XI.	$x^{\nu+\frac{1}{2}}J_o(x)$	$S_{-\nu}$	S_ν	$-1<R(\nu)<1$
	$J_o(x)$	$S_s\ (S_c)$	$S_c\ (S_s)$	
	$x\,J_o(x)$	$S_s\ (S_c)$	$S_c\ (S_s)$	

XII.	$x^{-\frac{1}{2}\nu} H_{\frac{1}{2}(\nu-1)}(x)$	S_1	S_ν	$R(\nu)>-1$
	$x^{-\frac{1}{2}} H_o(x)$	S_1	S_1	
XIII.	$x^{\frac{1}{3}(\nu-1)} e^{\frac{1}{2}x} K_{\frac{2}{3}\nu-\frac{1}{6}}(\frac{1}{2}x)$	$S_{\nu-1}$	S_ν	$R(\nu)>o$
	(i) $x^{-\frac{1}{6}} e^{\frac{1}{2}x} K_1(\frac{1}{2}x)$	S_c	S_s	
	(ii) $x^{\frac{1}{6}} e^{\frac{1}{2}x} K_{\frac{5}{6}}(\frac{1}{2}x)$	S_s	$S_{\frac{3}{2}}$	
XIV	$x^{\frac{3}{2}-\nu} J_{\nu-\frac{1}{2}}(\frac{1}{2}x) J_{\nu-\frac{3}{2}}(\frac{1}{2}x)$	$S_{3\nu-3}$	S_ν	$R(\nu)>\frac{3}{2}$
	(i) $\frac{\sin\frac{1}{2}x}{x} J_{\frac{3}{2}}(\frac{1}{2}x)$	S_3	S_2	
	(ii) $x^{\frac{2}{3}} J_{\frac{1}{3}}(\frac{1}{2}x) J_{-\frac{2}{3}}(\frac{1}{2}x)$	S_c	$S_{\frac{5}{6}}$	
	(iii) $x^{\frac{1}{3}} J_{\frac{2}{3}}(\frac{1}{2}x) J_{-\frac{1}{3}}(\frac{1}{2}x)$	S_s	$S_{\frac{7}{6}}$	
XV.	$x^{\frac{1}{2}-\nu} J_{\nu-\frac{1}{2}}(\frac{1}{2}x) J_{\nu-\frac{1}{2}}(\frac{1}{2}x)$	$S_{3\nu-1}$	S_ν	$R(\nu)>o$
	(i) $x^{-\frac{3}{2}}(1-\cos x)$	S_2	S_1	
	(ii) $J_o(\frac{1}{2}x) J_o(\frac{1}{2}x)$	S_s	S_s	
	(iii) $x^{\frac{1}{3}} J_{-\frac{1}{3}}(\frac{1}{2}x) J_{-\frac{1}{3}}(\frac{1}{2}x)$	S_c	$S_{\frac{1}{6}}$	
XVI.	$J_{\frac{1}{2}\nu-\frac{1}{4}}(\frac{1}{2}x) J_{\frac{1}{4}-\frac{1}{2}\nu}(\frac{1}{2}x)$	$S_{1-\nu}$	S_ν	$-1<R(\nu)<2$
	$\frac{\sin x}{x}$	S_c ($S_{\frac{3}{2}}$)	$S_{\frac{3}{2}}$ (S_c)	
XVII.	$x^{\frac{1}{3}\nu+\frac{1}{6}} J_{\frac{1}{3}\nu+\frac{1}{6}}(\frac{1}{2}x) Y_{\frac{1}{3}\nu+\frac{1}{6}}(\frac{1}{2}x)$	$S_{\frac{1}{3}(\nu-1)}$	S_ν	$R(\nu)>-1$
	(i) $J_o(\frac{1}{2}x) Y_o(\frac{1}{2}x)$	S_c	S_c	

(ii) $x^{\frac{1}{3}} J_{\frac{1}{3}}(\frac{1}{2}x)\, Y_{\frac{1}{3}}(\frac{1}{2}x)$	$S_{-\frac{1}{6}}$	S_s
(iii) $x\, J_1\,(\frac{1}{2}x)\, Y_1\,(\frac{1}{2}x)$	S_s	$S_{\frac{5}{6}}$

REFERENCES.

1. W. N. Bailey : On the solution of some Definite Integral Equations—J. London Math. Soc. VI (1931) 242-7

2. G. H. Hary and E. C. Titchmarsh : Formulae connecting different classes of Self-Reciprocal Functions—Proc. London Math. Soc. II 33 (1931) 225-32

3. B. Mohan : Some Theorems on Self-Reciprocal Functions—Proc. London Math. Soc. II 34 (1932) 231-40

4. ——: Theorems connecting different classes of Self-Reciprocal Functions—Proc. Edin. Math. Soc. II 4 (1934) 53-6

5. ——: Two Self-Reciprocal Functions—Proc. Physico-Math. Soc., Japan III 18 (1936) 133-4

6. —— : Formulae connecting Self-Reciprocal Functions —Indian J. of Physics XV (1941)

MAHATMA GANDHI

B. L. SAHNEY, M.A.

Mahatma Gandhi is the supreme scientist of Truth. His whole life has been a series of experiments with truth. And he has conducted these experiments in the spirit of a scientist, that is, he has conducted them with the utmost accuracy, forethought, and minuteness. And like a scientist, too, he has never claimed any finality for his conclusions, but has always kept an open mind with regard to them. He has conducted his experiments with truth not in an enclosed laboratory but in the open, because he believes that what is possible for him is possible for everybody else. The whole world, open to all alike, is his laboratory.

He is the greatest apostle of Truth in the modern world. Truth is for him the sovereign principle of life, a principle which includes numerous other principles of ancillary importance. And by Truth he means not only truthfulness in word, but truthfulness in thought and deed also, not only the relative truth of human conception, but also the Absolute Truth, the Eternal Principle that is God. "I worship God as Truth only."

The seeker after truth must have two essential virtues. Firstly, he must not do anything in deference to mere convention. Secondly, he must be humbler than the dust. And Mahatma Gandhi himself is the greatest exemplar of these two virtues. He has never cared for conventions. He has always been fearless and independent. And he is the very embodiment of humility. He writes:

"I must reduce myself to zero. So long as a man does not of his own free will put himself last among his fellow-creatures, there is no salvation for him."

"Let hundreds like me perish, but let truth prevail."

"The more I reflect and look back on the past, the more vividly do I feel my limitations."

He is the most moral, the most spiritual, the most religious-minded of men in our world to-day. He is one of the most God-intoxicated souls of all times and as such ranks with prophets like Buddha and Christ, Zoroaster and Mohammad.

God alone is real to him and all else is unreal. The world itself is for him 'the play-ground of God and a reflection of His glory.' He says: "All that appears and happens about and around us is uncertain, transient. But there is a Supreme Being hidden therein as a Certainty, and one would be blessed if one could catch a glimpse of that Certainty and hitch one's waggon to it. The quest for that Truth is the *summum bonum* of life."

Self-realisation, to see God face to face, to attain *Moksha* is the ultimate aim of his life. He lives and moves and has his being in the pursuit of this goal. All that he does, all that he speaks, all that he writes, all that he ventures upon in the political field even, is directed to this same end. And he has an ineffaceable faith in the grace, in the sustaining power of God. "His name and His grace are," he says, "the last resources of the aspirant after *Moksha*."

His faith in God, indeed, amounts almost to personal experience. But what is even more remarkable than his faith in God is his faith in his own effort. And his faith in his own effort is the direct corollary of his faith in God. It is also the outcome of his firm faith in the law of *Karma*. "It is my firm conviction," he says, "that all good action is bound to bear fruit in the end." On account of his firm faith in God, on account of his equally firm faith in human effort, and on account of his iron conviction of the validity of the law of *Karma* he is an incorrigible optimist. He never gives way to despair.

For self-realisation or for the realisation of God three things are absolutely necessary in his eyes: perfect *Brahmacharya*, an absolutely disinterested service of humanity, and flawless *Ahimsa*. Let us consider these values one by one.

Brahmacharya is not an easy job. It is 'like walking on the sword's edge.' It means 'the necessity for eternal vigilance.' It means control of the palate, of the senses in thought, word, and deed. It means fasting and prayer. And, above all, it means control of the mind. An aspirant after *Brahmacharya* must always be conscious of his short-comings. He must seek out the passions lingering in the inmost recesses of his heart and must incessantly strive to get rid of them. He must keep his mind under complete control of the will. And to control the mind is even more difficult than to control the wind. "To conquer the subtle passions," says Mahatma Gandhi, "seems to me to be harder far than the physical conquest of the world by

the force of arms." But it is not impossible. "The existence of God within," he writes, "makes even control of the mind possible."

Life without *Brahmacharya* is insipid and animal-like. He says: "The brute by nature knows no self-restraint. Man is man because he is capable of, and only in so far as he exercises, self-restraint." He writes:

"*Brahmacharya* is indispensable for self-realisation."

"A perfect observance of *brahmacharya* means realisation of Brahma."

The second ideal which is necessary for self-realisation is the disinterested service of humanity. But this ideal can never be achieved without *Brahmacharya*. He says: "The pleasures of family life and the propagation and rearing of children are incompatible with the ideal of universal service." We must serve our fellow-brethren out of a sense of duty and not with any hope of reward. Further, we must serve them in a spirit of joy. He says: "Service which is rendered without joy helps neither the servant nor the served. But all other pleasures and possessions pale into nothingness before service which is rendered in a spirit of joy."

Mahatma Gandhi is the greatest servant of God and of humanity. His service of humanity proceeds from his infinite love and compassion, from his supreme sense of duty, from his profound spirit of joy, and from his intense mystical consciousness of the essential unity of all life. He makes no distinctions. He has identified himself with everything that lives. He loves the meanest of creation as himself. A leper comes to his door. He has not the heart to dismiss him with a mere meal. He offers him shelter, dresses his wounds, and begins to look after him as if he were a god in disguise. Glorious, indeed, is the life of such a man, for he has already inherited the Kingdom of Heaven.

Now about *Ahimsa*. *Ahimsa* is in his eyes "the only means for the realisation of Truth." "A perfect vision of Truth can only follow a complete realisation of *Ahimsa*." *Ahimsa* necessitates self-purification. "Without self-purification the observance of the law of *Ahimsa* must remain an empty dream." *Ahimsa* means identification with everything that lives. And this identification is impossible without self-purification. *Ahimsa* is impossible of realisation without self-purification, without

universal love or identification of one's self with everything that lives, and without compassion, self-restraint, and humility. "*Ahimsa* is the farthest limit of humility," says Mahatma Gandhi.

The doctrine of non-violence is as old as the hills, but Mahatma Gandhi is the first to apply it on a mass scale to political and social movements.

Non-violence is the most potent weapon for righting wrong in the world, the wrong which is the inevitable outcome of the operation of the three main forces of evil, namely, lust, anger, and greed. Non-violence is the weapon of love. It is the weapon of one who has identified himself with everybody, even with his enemies. It is the weapon not of the weak but of the strong, of those who have genuine strength, that is, strength which comes not from physical capacity but from an indomitable will. "Non-violence," says Mahatma Gandhi, "is the law of our species as violence is the law of the brute. The spirit lies dormant in the brute and he knows no law but that of physical might. The dignity of man requires obedience to a higher law—to the strength of the spirit."

Non-violence is the weapon of self-sacrifice, of those who believe that he who loseth himself findeth himself. It is the weapon of suffering, which is the badge of our tribe, of suffering consciously undergone for the good of humanity, for the righting of wrongs in the world. Mahatma Gandhi says: "Non-violence in its dynamic condition means conscious suffering. It does not mean meek submission to the will of the evil-doer, but it means the putting of one's whole soul against the will of the tyrant. Working under this law of our being, it is possible for a single individual to defy the whole might of an unjust empire to save his honour, his religion, his soul, and lay the foundation for that empire's fall or regeneration."

Non-violence is not a negative ideal. It is not non-resistance. It is non-violent resistance. It is not the weapon of ineffectual pacifists or of non-resisters of the Tolstoyan variety. It is the weapon of those who have realised that the soul is immortal, that it can rise triumphant above all physical weakness and defy the physical combination of a whole world.

Non-violence is infinitely superior to violence, just as forgiveness is infinitely superior to revenge. Violence cannot vanquish wrong. It only succeeds in making the evil will deeper

and firmer. It may remorselessly suppress it for the time being, but inevitably it breaks forth again with tenfold vehemence when it finds a suitable opportunity. Violence breeds violence. You cannot cast out Satan by Satan but only by that Godlike Will which takes upon itself suffering for the sake of changing the spirit of aggression into the spirit of love and amity.

Non-violence makes a creative use of suffering for the redemption of others. It is based on the two-fold assumption that nobody is beyond redemption and that human nature is essentially one and the same, and, therefore, unfailingly responds to the advance of love. Non-violence has nothing to do with 'passivity in any shape or form.' It is 'the most active force in the world.' And 'mankind can only be saved through non-violence.' Not only that; being essentially a process of self-purification, non-violence saves the individual also. And non-violence is meant not only for the elect but also for the common people, since it is "the law of our species as violence is the law of the brute."

But there are certain rules of conduct which he who would use the weapon of non-violence must observe with scrupulous strictness and integrity.

The first rule of conduct, the observance of which is absolutely necessary for a *satyagrahi*, is this: he must 'see his own mistakes with a convex lens' and do 'just the reverse in the case of others.' Secondly, a *satyagrahi* must be an embodiment of politeness. He must be civil under all circumstances. "Civility," says Mahatma Gandhi, "is the most difficult part of *satyagraha.*" And by civility he means not merely 'outward gentleness of speech cultivated for the occasion but an inborn gentleness and desire to do the opponent good,' such as should reveal themselves in every act of a *satyagrahi*.

Thirdly, a *satyagrahi* must clearly distinguish between a man and his deed. He should condemn a wicked deed, but he must always show respect or compassion, as the case may deserve, to the doer of the deed, however wicked he may be; for we are all tarred with the same brush and are children of one and the same Father. He must hate the sin but not the sinner. He should resist and attack a vicious system but not its author. To slight a single human being is to slight ourselves, to slight the divine powers within us, to slight our common Father.

It is not everybody, however, who is qualified to become a *satyagrahi*. He alone has the right of civil resistance who has obeyed the laws of society intelligently, of his own free will, and out of a sense of sacred duty, and who is, in consequence, in a position to judge as to which particular laws are unjust and iniquitous.

There are two books which must be mentioned in any consideration of Mahatma Gandhi's ideas. The first is our own *Gita* or *The Song Celestial* and the second Ruskin's *Unto This Last*. They had a profound influence upon his life and teaching. The *Gita* is for him "an infallible guide of conduct." It is his dictionary of daily reference, a dictionary of conduct, which he consults for a ready solution of all his troubles and trials. *Unto This Last* is of all the books he has read the one that brought about, as he says himself, "an instantaneous and practical transformation in my life." From the *Gita* he learnt the principles of non-possession or renunciation or *aparigraha*, of celibacy or *brahmacharya*, and of equability or *samabhava*. And from *Unto This Last* he learnt the lessons that the good of the individual is contained in the good of all ; that a lawyer's work has the same value as a barber's ; and that a life of labour is the only life worth living.

Mahatma Gandhi is the supreme poet of life. He is in actual life what Shakespeare was in literature. Intensity is the key-note of his life, that intensity which is not incompatible with absolute composure of the mind. He has the highest variety of imagination, that imagination by means of which the soul holds a direct communion with God. He has that inward eye which is the bliss of solitude and which perceives the Ultimate Reality hidden behind the multitudinous veil of appearance. Like Socrates, he is possessed by a 'daemon,' an Inner Voice, a spirit. And when that Inner Voice has spoken, he is as immovable as a mountain, even though Death may stare him in the face or lay his icy hands on his frail limbs. He has absolute self-control and composure, invincible calm and imperturbability. He acts with the spontaneity of divine inspiration. He writes just as the Spirit moves him at the time of writing. "The greatest steps that I have taken in my life," he says, "as also those that may be regarded as the least—all of them were directed by the Spirit." Even *satyagraha*, he writes, "had not been a preconceived plan. It came on spontaneously, without my having willed it."

He is no visionary. He is a practical idealist, a pragmatic mystic, a mystic of Love, Beauty, and Truth,

of Love which is self-sacrifice, of Beauty 'whose smile kindles the universe,' and of Truth which is God. He is a religious mystic. He is a philosophical mystic. And, above all, he is a political mystic, for he possesses a marvellous instinct for sensing the mass mind and for acting at the psychological moment with the inevitability of inspiration or of some supreme force of Nature.

He is no idle dreamer lost in the maze of metaphysics. He is a constructive politician with a definite programme, a wise statesman who can look far into the future, who can convert public calamities into national triumphs. He is a sage, a humanist, a physician to all men. He soothes the cares and lifts the thoughts of men. He calls forth the good that is latent in the human heart. The miseries of the world are misery to him and will not let him rest. He loves his fellows even to the death. He feels the giant agony of the world and labours for cosmic good. He can bear all naked truths and envisage circumstance in perfect serenity, which is, according to Keats, 'the top of sovereignty.' And, above all, he has within him a power of enormous ken—

"To see as a god sees, and take the depth
Of things as nimbly as the outward eye
Can size and shape pervade."

Mahatma Gandhi is an integrated personality. He is great in every sphere of life and in every quality of the mind, heart, and soul. He is the greatest man of the world to-day. And he is great among all the great men of ages past. He is as great as Washington as a nationalist leader. He is as great as Lincoln as an emancipator of the enslaved. He is as great as St. Francis as a teacher of 'the love that never faileth.' He is as great as Buddha or Jesus as a religious prophet.

He has a passion for self-help and simplicity. His simplicity is obvious to any one who beholds him. Generally he has only a *khaddar* loin-cloth on his body. When he goes out, he puts on a *khaddar* wrapper, if it is particularly cold, and carries a heavy staff in his hand. Thus, he is the very embodiment of home-spun simplicity and looks every inch a peasant of the soil. And his simplicity is not confined to his dress. It permeates every fibre of his being. It pervades every word and every act of the man. He is incapable of any sham, pretence, and affectation. A man of so transparent a character is hard to find anywhere in the world. He thinks

aloud. He shows you all his thoughts. He places all his cards before you on the table. He keeps nothing up his sleeves. "His brain is like a bee-hive under glass: you can watch all its workings." Though one of the most powerful minds in India to-day, he has the heart of a child. He is particularly fond of children. He himself says: "I am happiest when in the midst of children." And children are equally fond of him. They love him as they would love their own father or mother.

His passion for self-help is known to everybody who has come in contact with him. Though he has millions at his beck and call, he has made himself absolutely self-sufficient. Long ago, when he was in South Africa, he made up his mind to do his washing with his own hands. Washermen are proverbially unpunctual. You cannot rely on them. Mahatma Gandhi equipped himself with a washing outfit, bought a book on washing, studied the art, and practised it till he became, as he says, "an expert washerman." There is a humorous incident which throws much light on this aspect of his character. In the first collar that he washed he used more starch than was necessary. The iron also was not made hot enough. And for fear of burning the collar he did not press it sufficiently. The result was that, though the collar was fairly stiff, the superfluous starch dropped off it every now and then. With this collar on he went to the court and afforded a world of mirth and ridicule to his brother barristers. But Mahatma Gandhi is impervious to ridicule. When he has once made up his mind to pursue a definite course of action, nothing can deflect him even by a hair's breadth from it except his own realisation that it is wrong.

Another incident, even more humorous than the foregoing, is this. Once he went to an English hair-cutter in Pretoria, who contemptuously refused to cut his hair on account of the strong colour-prejudice against Indians. Mahatma Gandhi immediately purchased a pair of clippers and cut his hair before the mirror. He succeeded more or less in cutting the front hair, but he spoiled the back. When he went to the court, his friends shook with laughter, saying, "What's wrong with your hair, Gandhi? Rats have been at it?" In this way, he freed himself from slavery to the barber, as he had thrown off dependence upon the washerman.

Some English admirers of Mahatma Gandhi have tried to prove that he is more of a Christian than a Hindu in his

mode of life and in his beliefs. They have such narrow and erroneous notions about Hinduism that they cannot understand the greatness of Mahatma Gandhi without a strong influence of Christianity upon his life and character. A. C. Underwood, for instance, in his chapter on Mahatma Gandhi in *Contemporary Thought of India,* says that "Hindu piety alone could never have produced a man like Mr. Gandhi." In his book entitled *Gandhism* P. Sprat describes him as "a Christianised Hindu." Well, the Englishman has a genius for appropriating what belongs essentially to others, particularly if it is of good and noble report. And Englishmen have persisted in regarding Mahatma Gandhi as a Christian in the face of his declaration that he is a Hindu.

What has been Mahatma Gandhi's reaction to Christianity ?

Mahatma Gandhi has an instinctive reverence for all religions, a toleration for all faiths. For Christianity, however, he "developed a sort of dislike," as he says himself. He could not put up with the Christian missionaries' open abuse of the Hindus and their gods. He could not put up with their eating beef and drinking liquor. A religion which compels a man to eat beef and to drink liquor does not deserve the name. "All these things," writes Mahatma Gandhi, "created in me a dislike for Christianity." He does not believe that Jesus is the only incarnate son of God and that only he who believes in Him will have everlasting life. He does not believe that Jesus by his death has redeemed the sins of the world. He does not believe, as does Christianity, that human beings alone have souls, and not other living beings. He does not believe that for other living beings death means complete extinction. He accepts Jesus 'as a martyr, an embodiment of sacrifice, and a divine teacher, but not as the most perfect man ever born.' Comparing the life of Jesus with that of Buddha, he writes : "Look at Gautama's compassion. It is not confined to mankind, it is extended to all living beings. Does not one's heart overflow with love to think of the lamb joyously perched on his shoulders ? One fails to notice this love for all living beings in the life of Jesus."

Concerning the Bible he says that he could not read through the Old Testament and that it invariably sent him to sleep. It was only the New Testament, particularly the Sermon on the Mount, which impressed him. And in the Sermon on the Mount particularly the verses, "But I say unto you, that ye

resist not evil: but whosoever shall smite thee on thy right cheek, turn to him the other also," delighted him beyond measure. But the lesson which these verses convey Mahatma Gandhi had already learnt from a Gujerati poem of Shamal Bhatt's, the concluding lines of which, rendered into English, run as follows:

"The truly noble know all men as one,
And return with gladness good for evil done."

About this Gujerati poem he says that it "gripped my mind and heart. Its precept—return good for evil—became my guiding principle." Of the few books which he read on the Bible he particularly liked *The Perfect Way* and *The New Interpretation of the Bible.* But he liked them, as he says, because "they seemed to support Hinduism." Mahatma Gandhi's attitude towards Christianity is obvious and it may be stated in his own words—"Philosophically there is nothing extraordinary in Christian principles. From the point of view of sacrifice, it seems to me that the Hindus greatly surpass the Christians. It is impossible for me to regard Christianity as a perfect religion or the greatest of all religions."

Mahatma Gandhi is assuredly not a Christian. He is a Hindu. He believes in the Hindu scriptures and in the doctrines of incarnation and rebirth. He believes in the transmigration of souls and in the law of *karma.* He emphasises the ascetic ideal. He approves of idol worship as a means of religious concentration. He believes in Brahmacharya as the way to spiritual perfection. He recognises the caste system and teaches the special sanctity of the cow. He is a Hindu in all these respects. And he is a Hindu, above all, in his all-comprehensive tolerance of conflicting religions. His reverence for other religions, however, does not make him insensitive to the worth of his own, to the subtle and profound thought of Hinduism, its splendid vision of the soul and its self-effacing charity. On one occasion, indeed, he even goes to the extent of saying that "I place Hinduism higher than other religions." But, in order to avoid misunderstanding and out of genuine respect for the feelings of those who follow other religions, he writes, too, and rightly, that "The world, and therefore we, can no more do without the teaching of Jesus than we can without that of Mohammad or the Upanishads. I hold all these to be complementary of one another, in no case exclusive. Their true meaning, their inter-dependence and inter-relation, have still to be revealed to us."

Altogether, Mahatma Gandhi is a unique personality of our times. There is nobody like him, none to equal him, none who is his peer. He lives on such spiritual altitudes as we can understand and aspire after but never hope to attain in our life-time, despite the consciousness that salvation from the miseries of the world is possible only on those heights and not in that vale of tears and humiliation in which we all live as a rule. He is often as quiet as a nun breathless with adoration. He is plain as a pike-staff, simple like a sun-beam. And yet he is as inaccessible as the clefts and gorges of the clouds, and as inexorable as the flight of Time. What is complex is easy to understand, for it is analysable. But Mahatma Gandhi has that supreme mystery of simplicity which defies all attempts at analysis and appeals irresistibly to our innate sense of wonder and reverence. He has reduced life to the lowest denominator and has thereby understood and mastered it with such perfection as is the envy of the ambitious, the despair of the weak, and the joy of those who can understand, appreciate, and endeavour to emulate, what is truly great, noble, and sublime.

He has millions among his followers. The masses look up to him as to a demigod possessing preternatural powers, and the classes revere him as the rarest embodiment ot purity, piety and perfection. Men touch the hem of his garment and go away healed. They get a distant glimpse of the man and deem to have obtained the Beatific Vision. But few can truly follow him. For to follow him you must set your house on fire, you must give up your wife and children and the thousand ties of blood and bread, wine and water. You must burn your boats before you can cross the Rubicon with him. You must lose yourself before you can find yourself by his side and by the side of God whose supreme Apostle he is in our century.

HUMOUR

M. M. Desai, M.A.

"Paradise belongs to him who makes his companions laugh"—*The Talmud*

Love of laughter was a trait of the ancient Greeks and it is well known that the Greeks were balanced and artistic people. Plato who wanted to keep the poets out of his ideal republic declared the *agelastoi* or non-laughers as the least respectable of mortals. An old proverb tells us to laugh and grow fat. Man is better described as an animal capable of laughter than as an animal capable of reasoning. It is in human nature to love a lark because man is fond of humour. But the word "humour" is a word of many meanings and of strange fortune in their evolutions. Dr. Johnson in his dictionary gave nine definitions, or equivalents, for the word "humour." Thackeray and Meredith have extended the meaning beyond its nine senses as stated by Dr. Johnson. Great writers like Aristotle, Plato, Coleridge, Hazlitt, Voltaire, Michelet, Schopenhauer, Bergson and Freud to mention only a few have written about it. But like squaring the circle though it has been much argued about no satisfactory definition of humour has been discovered and none will be attempted in this article. Some persons cling to definitions as drunken men in the street cling to lamp-posts for support rather than illuminations. Epithets applicable to humour are elusive, evasive, evanescent, ephemeral, intangible, imponderable and so on. It is safe not to rush in where angels fear to tread and hence no clear cut definition or a scientific formula as a touchstone of humour is attempted in this article.

A great writer once wrote that humour is a philosophic emotion. We do not know about it; philosophic emotion or not it has a prophylactic quality against some of the ills of life the human flesh and mind are heir to. Humour is an adroit and exquisite device by which our nerves outwit the petty slings and outrages of life and fortune. In humour there is an element of the ridiculous and sometimes of discomfiture. From the Circus Clown to Charlie Chaplin, episodes of discomfiture make us laugh. Every newspaper cartoon or comic series (from *Punch* to *Comic Cuts*) hinges on the discomfiture of somebody. The fly on the bald head, the collar button under the bureau, the henpecked husband and the home-peace

disturbing mother-in-law, all depend for their humour on the trifling misfortune that makes its victim ridiculous. The discomfiture involved in humour must not be of a serious or tragic nature. If a man's hat blows off and he runs after it in the street, the passers-by laugh; they enjoy it better if he is a fat man puffing after his hat; but suppose he is hit by a passing motor car their laughter is suddenly turned into a cry of horror and sympathy for his mishap. There is no humour in death or tragedy though we know how a brave person apologised to his friend for being "unconsciousably long a-dying" and there is the story of Sir Thomas More who when he set his foot upon the scaffold and it shook a little said to his executioner "Help me to ascend—I will shift for myself coming down."

Man is a gregarious animal; he enjoys the company of his fellow creatures but he enjoys their discomfiture also. His sense of well-being is tickled by the mild discomfiture of his fellow men; it acts as a sauce to help him to relish life. But that discomfiture must be trifling not serious. A misanthrope alone can enjoy serious discomfiture or harm to another fellow man. A real humourist is a social person. Humour is that little touch of nature which makes us wonderous kind. It is a bond of human kinship. In modern times where men congregate, in our schools and colleges, offices and clubs, the professional humourist has become a great nuisance; the club wag is as much a trial to other members as the club bore. He takes himself too seriously and makes life a serious burden to himself and others. The real humourist takes life lightly and always looks at the funny side of life. The essence of humour is flexibility and not fixation. Possession of a sense of humour is real aid to preservation of sanity in one's out-look on life. Many things require to be looked at, many to be overlooked in life; the humourist knows when, where and how to look and also what is still more important how to overlook. When Alice takes her readers in her wonderland she takes them in a world full of humour populated by such deliciously humourous characters as the Mad Hatter, the March Hare, the King and Queen of Hearts and the Mock Turtle. Mr. Bernard Shaw whom M. Augustin Hamon calls the Molière of the twentieth century writes: "Humor is an element, not a product, nor a compound. It makes you laugh that is how you detect its presence. Dirt, cruelty, disaster are rich in it; happiness and generosity abound in it; mere folly absorbs it freely; it attaches itself to every kind of event with complete moral indifference, having no sort of bias one way or another between the adventures of Saint Francis and those of Mr. Charles Chaplin." Thackeray

remarked about a man of "humouristic turn" that he is "pretty sure to be of a philosophic nature, to have a great sensibility, to be easily moved to pain or pleasure, keen to appreciate the varieties of temper of people round about him and sympathise in their laughter, love, amusement and tears."

Shakespeare was a greater writer than Milton among other things because he was a master of humour while it is well known that Milton was deficient in humour. The creation of Falstaff, Shakespeare's most humorous character, the man who was not only witty in himself but the cause of wit in other men including Shakespeare's critics, was in danger of making Shakespeare *Molière malgré lui.* Wordsworth was a great poet but woefully lacking in a sense of humour and hence artistic balance. Because he lacked a sense of humour he gave us those long, dull, dismal patches of prose in his poetry. Once Wordsworth declared that he could write like Shakespeare if he had a mind to try it. Charles Lamb wrote to his friend Manning about it and added with his characteristic humour "It is clear that nothing is wanting but the mind." There was no man of greater "humouristic turn" of mind in English literature than Charles Lamb. We see it in the earliest anecdote about him. A little more than an infant, he was walking through graveyards in Hertfordshire with his sister Mary even then his constant companion and guide. The churchyard was filled with testimonials to the virtues of the dead. He turned to his sister and asked : "Mary, where are the naughty people buried ?" But the rich flavour of Lamb's characteristic humour is found in the following ancedote. One evening Coleridge, Godwin and Holcroft were discussing seriously "Man as he is and man as he ought to be." Lamb intervened in the debate and perhaps with his tongue in the cheek said "Give me the man as he ought not to be." There is whimsicality in the humour of Lamb which along with his essential humanity endears him to his readers. Much of the well known humour of Lamb is verbal, lot of it is superficial, he is a literary acrobat, he is the best and worst punster in the English language. But in spite of this as a humourist he stands in the foremost rank, less poetic, less idylic than Goldsmith, less sardonic than Swift, less creative than Dickens but he belongs to the brotherhood of Chaucer and Scott. In modern times there is much imported mutton masquerading as Lamb among our newspaper men and essayists but we cannot hold enjoyable Elia responsible for these who claim to be his posterity. Elia died a bachelor and left no issues. The pretenders who claim his estates are not the true sons of Elia. *Punch* humour is according to the prescription of Hobbes "a

flash of glory arising from a transient sense of superiority." To keep up that sense of superiority among those *rentiers* in England who still believe that they are members of the governing class is the chief social function of *Punch*. *Punch* remains the best paper, lulling the Bloomsbury babies that refuse to grow up and speaks for and supports suburbia in *excelsis*, the ridiculous made sublime. Outside *Punch* English humour in the widest sense of that word has many practitioners in contemporary literature. Sir John Squire, Bernard Shaw, A. P. Herbert, W. W. Jacob, G. K. Chesterton, P. G. Wodehouse, Wyndham Lewis, Robert Lynd, E. V. Lucas, Cecil Hunt, George Bullet are some of the outstanding humorous writers of to-day in England.

Hobbes remark "Humour is a flash of glory arising from transient sense of superiority" is often referred to by writers on humour. Freud assures us that the hilarious satisfactions in humour, even those of the sudden glory, can be shown by means of psycho-analysis to be fundamentally sexual. One of his thought provoking books is *Wit and Its Relation to the Unconscious*. Humour, however, is not an exact science but an art; it has an unpredictable element which no social or psychological scientist can successfully analyse. Just as there is a centre of gravity in a serious thought there is a centre of levity in a humorous remark. The great master of comedy Molière can draw a hearty laugh from very simple situations or observations. In *Le Bourgeois Gentilhomme* the teacher of languages solves with sublime simplicity the problem of distinction between prose and verse by telling his elderly pupil that what is not prose is verse and what is not verse is prose and the simple bourgeois is delighted to discover that he has been talking prose for forty years without knowing it. Students of Pope are familiar with his famous lines on Sir Isaac Newton

> "Nature and nature's laws lay hid in night
> God said, 'Let Newton be' and all was light."

This couplet was capped by the impish parodist Sir John Squire:

> "It did not last: The Devil howling Ho!
> Let Einstein be! restored the status quo."

Often we find appropriate inappropriateness in a humorous remark. "Is your wife entertaining this winter?" asked one society man of another. "Not very" was the reply. The humour of under-statement is irony, of overstatement is exaggeration. We laugh not at the much but at the too much,

and not at the little but at the too little. It will be difficult to find a better instance of irony than the following. Mark Twain sent from London the following message when he was reported dead in the New York newspapers—"The reports of my death are grossly exaggerated." So much is contained in so brief a statement. By saying too little he raises laughter; the *dementi* contains only eight simple English words but their effect is devastating. A joke cannot be explained nor nursed. It must receive an instantaneous response. You cannot analyse it like the fragrance of flowers. The best war time joke is perhaps of a man who said that he would hate to be delivered over to a red, cross nurse. The *pun* here is a mere matter of punctuation but the result is delicious beyond words.

Mr. Max Eastman quotes a penetrating analysis of his art by the modern monarch of mirth Charlie Chaplin. When asked what it is that he does to people when he makes them laugh Charlie Chaplin replied. "It is telling them the plain truth of things. It is bringing home to them by means of a shock that sanity of situation which they think is insane. When I walk up and step a fine lady, for instance, because she gave me a contemptuous look, it is really right! They won't admit it, but its' right, and that is why they laugh. I make them conscious of life. 'You think this is it, don't you?' I say, 'Well it isn't, but this is, see?' And then they laugh." Mr. William Whitebait in a review of Charlie Chaplin's great film, *The Great Dictator* writes: "There are moments when we hardly know whether to laugh or not. At one such moment, in an ominously empty street, the little Jewish barber with bowler and cane is faced by advancing storm-troopers. He turns and begins his familiar shambling trot, only to find that the other end of the street is blocked too; the assailants close in, with Charlie doing a few frantic steps between, and he disappears from view. In a minute or so we have experienced a number of things. sharp dread, suspense, the balance between comic flutter and grims walls closing in (this is a distant shot from above), and it is not till later, when in a similar emergency he dives away clear as a whistle, that our uneasiness is resolved. The laugh when it comes is sudden and full. Some critics have found these intrusions of reality incongruous, but all humour is incongruous; the sharper the incongruity the clearer must be the release. Chaplin supplies the release infallibly, with endless invention."

There are many mansions in the House of Humour. Satire, wit, pun, parody, irony, repartee, joke, epigram, caricature,

burlesque, mock epic and other forms of mock poetry are all embraced in the family of humour. Some of them belong to the prose branch of the family and others to the exalted branch of poetry. Humour and its offsprings are sometimes linguistic or verbal in their basis and sometimes deeper in the sentiment, mood, atmosphere, situation, character etc. which flavour it. It will take more time and space to discuss all these than is possible to bestow in a short desultory article like the present one.

Satire belongs to the family of humour but it has changed somewhat its colour and character. If humour is compared to sugar, satire can be compared to vinegar. Joseph Hall wrote:

"The satire should be like porcupine,
That shoots sharp quills out in each angry line,
And wounds the blushing cheek and eye,
Of him that hears and readth guiltily."

And the Earl of Mulgrave declared:

"But 'tis men's *foibles* nicely to unfold
Which makes satire different from a scold."

The satirical and romantic temperaments are somewhat incompatible; at least they rarely go together. The satire is a lower form of literature; the satiric spirit is more prosiac than poetical. The fact that satire does not belong to the highest genre of poetry is seen in this that the golden age of English satire was the least poetical period of English literature.

Both wit and humour are elusive and indefinable. They are often confused and are placed by critics in opposition. They are intrinsically different though often outwardly alike. English wit is irrigated by humour. English literature is rich in humour, French literature in wit. The French word *esprit* is almost untranslatable in English. The difference between *esprit* and wit is similar to the one between poetry and verse. Wit demands a soil of civilisation to grow. Humour one can meet in less cultivated society. Humour is democratic, wit is aristocratic. Wit is intensive or incisive; humour is expansive. Wit is rapid humour is slow. Wit is sharp; humour is gentle. Wit is intentional; humour is fortuitous. Humour may sting but never injuries; wit often does so and aims to do so. Wit is subjective; humour is objective. Wit originates in one's self; humour is outside one's self. Humour is the fixed and permanent appreciation of the ludicrous of which wit may be the short

and transient expression. That which distinguishes humour from wit is an all embracing sympathy, appreciation and love. Wit is transitory mirth; humour has laughter which blends with tears and is often at one with pity. The common place complet of Pope:

> "True wit is nature to advantage dressed,
> What oft was thought, but ne'er so well expressed."

is a true statement of the attitude of writers in an age which gave undue emphasis to the technique of verse.

Popes' wit is waspist, Johnson's majestic, Lamb's whimsical, Wilde's sparkling, Shaw's penetrating and Chesterton's paradoxical. Pope is rather a master satirist than a master wit. Dr. Johnson's wit lay in flashes of comments upon life and persons then known as epigrams and now as wisecracks. He said once, "I never take a nap after dinner, but when I have had a bad night, and then the nap takes me." Formerly the word wit signified intellectual excellence; nowadays it seems to be applied almost exclusively to repartee. Whistler and Wilde as wits were artists in attitudes. They were out to *épater le bourgeois*. Whistler's *Gentle Art of Making Enemies* is a masterpiece of wit and irony. Somebody remarked during the Boer War that General Buller had retired across the Modder without losing a man, a flag or a gun. Whistler added "Or a minute". He described British critics as "mediocrity weighing mediocrity in the balance and incompetence applauding its brother." Wilde is well known for his sparkling epigrams and brilliant *bons mots*. About Mr. Bernard Shaw he said: "He has no enemies but he is thoroughly disliked by his friends." Once Wilde stepped up into a florist's and asked "Can you take flowers out of the window?" "Certainly, sir, which do you want?" asked the shop girl. "Oh, I don't want any. I only thought some of them looked tired." Mr. Bernard Shaw's plays and prefaces abound with many sparks of his scintilating wit. Here are couple of instances. "It is dangerous to be sincere unless you are also stupid." "Your hundred per cent American is ninety nine per cent an idiot." G. K. Chesterton is known as the most paradoxical writer of the modern age. His intellectual acrobatics and tiresome paradoxes sometimes strike one as puerile. Here are couple of instances. "The two things that a healthy person hates most between heaven and hell are a woman who is not dignified and a man who is." "If a thing is worth doing it is worth doing badly." This is a very comfortable doctrine and I quote it all the more readily as my defence of the article. One may quote a wit who said

"you can amuse some of the people all the time, and all the people some of the time but not all the people all the time."

Here are some instances of parody. The communist slogan "Workers of the world unite; you have nothing to lose but your chains," is parodied by a man of letters as follows: "Writers of the world unite; you have nothing to lose but your brains." The well known line of Shakespeare "One touch of nature makes the whole world kin," is parodied by a society wag as "One touch of scandal makes the whole world chin." Here is a fine pearl of parody combining wit and malice, changing the flavour but deliciously adding spice by parodying the lines from Tennysons' Sir Galahad:

"My strength is the strength of ten
Because my heart is pure"

in this line by Mr. Maxwell Anderson, the great American dramatist, in his play, *Winterset* "A hobo has the stench of ten because his shoes are poor."

English language is really very funny. We say that a man is in temper and that he is out of temper and mean the samething whether he is out or in temper. Let a lover tell the girl he is courting that time stands still when he looks into her eyes and she will lap the compliment as a kitten laps a saucer of milk; but let him tell her that her face would stop a clock and woe betide the lover though he has stated the same idea but the effect would be as different as chalk is different from cheese. Sometimes enjoyable howlers result from just a little unconscious *double entendre.* Here is what appeared on a poster by a London electricity firm: "Don't kill your wife with work. Let electricity do it." A baker described himself on his sign board as "the best loafer of the town." Sometimes school boy howlers are very amusing. Here are some instances. "Acrimony is the later end of matrimony." "A passive verb is one in which the subject is the sufferer such as 'He married her,'. "Milton wrote Paradise Lost; then his wife died and he wrote Paradise Regained." Let us quote couple of instances of what is known as Babu English. An Indian doctor called professionally on two ladies whose husbands were absent on military duty. Wishing to console them on the absence of their lords he said "I am very sorry to see that you are a couple of abandoned women." Needless to say that the Babu got the boot but he never learned why. An advertisement appeared in the columns of an Indian newspaper as follows:

"Mahomedan hair cutter and clean shaver
Gentlemen's throats cut out with great care
and skill. No irritating feeling afterwards. A trial solicited."

No newspaper report is available in the files of that particular newspaper about the courageous gentlemen who responded to this generous offer.

You cannot ask the tail to wag the dog but sometimes the tail of a sentence makes it wag very energetically and enjoyably. Here are some instances:

(*a*) The A. A. barrage is a waste, firing at nothing and hitting it every time.

(*b*) A man may have a sound memory like a pin-cushion! Everything that goes into it—sticks.

(*c*) Last night I held a hand, so dainty and so sweet
I thought my heart would surely break so wildly did it beat,
No other hand in all the world can greater solace bring,
Than the sweet hand I held last night—four aces and a King.

(*d*) Mr. Wedgewood Benn was easily moved to wrath and once in the House of Commons when he got up to reply to an attack his bubbling resentment made him almost inarticulate. Mr. Winston Churchill said: "My Right Hon. friend should not develop more indignation than he can contain."

The gift of retort is possessed by an alert mind. A. G. Gardiner in *Prophets, Priests and Kings* wrote about Mr. Lloyd George's humour. "It leaps out in light laughter. It is the humour of the quick mind rather than of the rich mind. 'We will have Home Rule for Ireland and for Scotland and for Wales,' he said, addressing some Welsh farmers. 'And for hell,' interposed a deep, half-drunken voice. 'Quite right. I like to hear a man stand up for his own country'." Carlyle once gave a quick retort to his wife. Because he neglected her for his work, his wife in a pet said, "I wish I were a book and then you would pay me some attention." "Be an almanac, dear, so that I may change you every year" was Carlyle's graceless retort. Once Sir William Joynson-Hick made some statement in the House of Commons to which Mr. Winston Churchill gave signs

of demurring. "I see my Right Hon. friend shakes his head, said Sir William, "but I am only expressing my own opinion." "And I" answered Mr. Churchill "am only shaking my head." Here is a story from an officers' training camp. The instructor called upon a fat candidate for commission to explain the solution of a problem in tactics. The fat one rose, made one or two attempts to explain the problem and then admitted that it was beyond him. "You seem to be better fed than taught," said the instructor cuttingly. "Yes, sir," replied the candidate, "you teach me, but I feed myself."

Once at a reception at a Mayfair house in London the pompous and uniformed butler announced the arrival of a guest to the general surprise of the assembly: "Damn says he, Curse says he, and his little boy." It was Sir Jamedjee Cursetjee Jeejebhoy who was so announced. Japanese are said to have no sense of humour but a wonderful sense of mimicry. No doubt they have paid the West the doubtful compliment of imitating its imperialism. Chinese are peaceful and leisure loving people. One notices a fine point in a point of view to be discovered in a talk between two Chinese quoted by Mr. John Gunther in *Inside Asia*: "The tennis anecdote is famous. Two Chinese pass an English club on a hot day, and see foreign players perspiring in exhaustion. One says to the other 'Obviously these foreigners are not poor. Why do they not hire coolies to play for them?'" A Chinese proverb says: "Fool me once, shame on you; fool me twice, shame on me."

Volume 7 Number 1

JOURNAL
OF THE
BENARES HINDU UNIVERSITY

1942

CONTENTS

POLITICS OF NEW WORLD ORDERS

By S. V. PUNTAMBEKAR, M.A. (OXON.)

The politics of new world orders is in its first phase *Mega-politics.* It is politics of shouting, disturbance and revolutionary propaganda. In its second phase it becomes *Real-politics.* It is politics of power, of dictatorship, of conquest of absolute authority, wanting to recast the old world order. In its final phase it assumes the form of *Meta-politics.* It becomes the politics of no-state or state-lessness. It is absence of politics. It is the final condition of an ideal Commune or City, Community or Commonwealth. It does not require any coercive codes, instruments and institutions of a Society in a transition and transforming stage. In the final stage its postulates are that man would be good and his social and economic conditions would be perfect, there being no self or selfishness, greed or anger, ambition or inequality. Man would be really social and socialised, spiritual and spiritualised. Therefore there would be no necessity of the ruler or the ruled, the punisher or the punished, the possessor or the dispossessed.

Professor Barker says that Political Science, in its full sense, is too difficult. It has too few certainties. Its premises are uncertain: its conclusions are dubious. Professors of Political Science seem to argue from questionable axioms by a still more questionable process of logic, to conclusions that are almost questionably wrong. A science of politics, therefore, cannot be built up without fixing the premises and problems with which it should deal and without determining the line of approach and the process of reasoning necessary for arriving at definite conclusions. The fundamental problems with which politics deals are those of peace and order, security and independence, authority and liberty of a regional unit. The unit may be small or great. These problems have a two-fold aspect, one relating to forces of disturbance from within, and the other to forces of aggression from without. But if a world order or unity is established then there would be no one left to attack from without and there would be no problem of external security and independence to be considered. Only the problem of internal peace and order would remain to be dealt with. There would then be no need of a code of international law for state relations an army and navy for aggression. But the problems of

maintenance of authority and liberty, of peace and order, and of promotion of justice and welfare would remain.

As there is at present no world unity and one central unitary authority, the Science of politics assumes two forms: one of what is, the other of what ought to be. The first is actualistic or realistic, and the second becomes idealistic or Utopian. A third form also arises dealing with the process of reform or revolution by which the first is changed into the second. All these forms are propounded in a number of theories by different political writers who are not unanimous in their approach to the understanding of man and human society, its history and ideals. Their different view points and theories about their nature, origin, course and importance lead to a number of conflicting theories and conclusions. Their processes of reasoning and their interpretations of human experience differ widely. Under such conditions we cannot get a determinate Science of politics, when their premises are unstable and undetermined, their processes of logic varied and their conclusions conflicting. A science of politics however can truly arise when a new world order is established and when the experience then gained about man, his society and ideals is fully valued historically, psychologically and sociologically and used for the organisation of a peaceful world society.

Since the last great war political theory has taken an international turn. It has become more idealistic and less realistic. It began to preach League ideals of international government and of world peace, arbitration, conciliation, co-operation, justice and association. But it could not create the fundamental conditions necessary for the establishment of an international Community, without which an international government was impossible. National sovereignties and conflicting ideas and programmes of National interests, besides the aspirations of suppressed nationalities and peoples, have hindered its achievement even in a preliminary form of international associations and conferences of all nations of the world. But the present war which transcends national conceptions and is dominated by ideas and forces of a new world order founded on a unitary and not on a federal basis may likely result in establishing a common government for mankind if a single power succeeds. If it at all comes into existence then a Science of politics for mankind as a whole, but guarding the interests, relations and liberties of various groups and individuals, would be possible. What lines of theorising and what principles of organisation would it assume can only be approximately and provisionally summarised by a study of

political writers who have thought in terms of new world orders trascending but proceeding from the old. Their *other worldlyism* or *new worldlyism* has made them approach the problem of politics in ways which reveal some common lines of thought, reasoning and concepts of human life, society and institution. Their idealisms may be different, their theories about man's nature, social organisation, origin of social and political institutions may disagree, but their lines of reasoning about the factors in human history, about the need, function and purpose of social institutions, the final forms of organisation of social life and the amount of authority and liberty in a new world order reveal surprisingly some common features. It is necessary to understand them and evaluate them. It can be done here very briefly.

In these *new-worldly philosophers* we notice two lines of political thought. One leads to a theory of *Statelessness* and the other to that of *Statefulness*. The first school is more idealistic and revolutionary. It wants and believes that State will ultimately wither away after establishing a new kind of Society where human behaviour and relations will be more just, peaceful, and habitual. So it pays more attention to the reform of human behaviour and relations and the destruction of certain human motives and group interests than to the balancing and reorganisation of structures of social and political institutions. The other School is more realistic and reformist. Without disturbing the existing modes and principles of social or national life it would like to reorganise primarily certain social and political institutions on a new structural basis and not abolish them to serve any radical or revolutionary ideology or idealism. This school is engaged today in propounding international federations and unions, regional spheres or continental orders or imperial dominions and commonwealths. They accept the old theories of national or international law, relations and politics. They do not approach afresh the problem of a new world order idealistically. They still believe in the old forms of state and society. But the first school is radical and revolutionary in this respect. Its philosophy of human life, human history and ideals is new. Consequently it develops two sets of political theories, one for the period of transition to a new Society and the other to suit it after its establishment.

The present difficulty in formulating political theory on old lines as the Second School wants to do is the new emphasis on individual liberty and its objective, and on class or group consciousness which have developed in contemporary politics.

The first school thinks that if its group or class or party could be enlarged to the extent that it covers and represents true humanity then there would be no need of a real political theory, because there the problems of authority and liberty, of group relations and functions will not arise, as their separatist interests and loyalties will be transcended and united and centralised in a new ideal of society and human order and liberty. The politics of new world order does not think in terms of liberty so much in the beginning as in terms of a new unity and a new order. It is more authoritarian and equalitarian in its tone and practice though more libertarian and liberal in its future aims and in theory. It does not admit of any moral or political science built on the conception of freedom and free-will of man, but only on a social and moral empiricism which arises in the working of the new world order which is to be imposed even on those who refuse or oppose to come within its fold. The law of reality supersedes the law of freedom. Real freedom is only attainable in the final world order which is inevitably coming.

Thus we are living in a social, political and economic atmosphere of *new worldlyism* of today, not of *other worldlyism* of the past. Hence we want to know what would be its order and structure, its values, virtues and laws of social and individual life. Socialists and Fascists try to give us some pictures of that new human life based on the teachings of their masters and leaders. The new worldlyism of the middle age had also its own pictures of a new life, painted by its prophets, apostles and fathers. We shall have to study the processes of their thoughts and analyse their ideas and view-points about man, society, history and human ideal in order to find out if there is anything common or similar in them. I shall take only two writers for my comparison; one St. Augustine of the middle ages, the other Marx of modern times. Both were for a new world order, which was to be brought about by a mental, moral and social revolution. Both give us some glimpses of the new Societies they want to establish and the processes and ways through which they will have to go.

We find three attempts at world Internationals or new world orders in the past as we find those of Marx and his followers in the present. One was the Buddhist International, the other Christian, and the third Islamic. They present a number of similarities in their social, moral and political ideas and outlooks which may be worth studying comparatively. But here I take only the Christian and Marxian Internationals as there is ample evidence for their study and close comparison.

The worlds of St. Augustine and Marx were rapidly changing worlds from intellectual, moral, social, political and economic poins of view. Old social and moral codes, political organisations and economic relations could not suffice for the new needs, ambitions and attitudes of various groups and classes. Consequently new thought and idealism had entered amongst them. It was created and developed by new thinkers who wanted a new human Society arising out of the old conflicting groups and classes and inspired them with a new idealism and with a fresh interpretation of human past and a fresh social forecast for the future. Both started with a philosophy of history and gave a particular interpretation to its course and its development. In this course of history they traced an inevitability, a preordained and predetermined plan, as it were. St. Augustine saw a law of God behind history, Marx a law of historical dialectics. This assumption of a unitary authority of principle behind the workings and happenings of past human life and society were necessary for any forecast of a new world order of a particular type and form. Thus they claimed to understand and to interpret the whole course of human affairs and to state dogmatically its final development, form and content. They had no full knowledge of all history. They applied unitary solution and causation for the multiple factors and causes of historical growth. They universalised their particular, narrow and limited experiences of human life and reading of human history and thus arrived at their so-called scientific or correct solutions and pictures.

Their main assumption is that hnman society is divided dichotomically into two societies at eternal war with each other till their own pet one destroys and supersedes the other by a process of warfare, persecution, conversion or revolution. The new society would be a unitary and centralised society possessing dogmatic values of human life and behaviour.

Political philosophy or science inherent in such a process of reasoning or scheme of thought can only be based on ideas of statefulness (omni-competent State) or statelessness (no-state). You can build a stable political theory on these two ideas but not on the liberal idea of partly state and partly no-state. There the problem of the relation of authority and liberty cannot be definitely solved because the content of both is not determined and stable. If you build your political science on the grandeur of a State-idea, freedom is not independently contemplated,if on the glory of a no-state idea or anarchy, authority is ultimately done away with. There is therefore no conflict finally contemplated or postulated between authority or control

on one side and freedom and obedience on the other. In the one, government is necessary, normal and benevolent and therefore no freedom, apart from what it gives, is required. In the other, the government is unnecessary, abnormal and evil, and therefore no authority, apart from what free human nature and good human habit possesses inherently, is wanted. Difficulty only arises when there is dual authority and dual freedom contemplated, of self and group, of Caesar and God. Therefore to build up political science you must either idolise state authority and destroy individual freedom, or idolise individual and his inherent goodness and destroy state authority.

But the political theory of ultimate *statelessness* requires a *statefulness* for the transition period from the human world as it is, to what it ought to be. This trasition 'state' which though ultimately not necessary, discredited and undesirable acquires the nature of a dictatorship in order to destroy what is, in the interests of what ought to be. It is no doubt to be a temporary one but it is considered necessary as an instrument in the establishment of a final order. Its characteristics are also somewhat different. Its functioning is subordinated to the realisation of an ideal scheme of life and to the control of a single group or a party which embodies, inspires and directs the achievement of it. Both these writers are cocksure of the correctness, strength and truth of their ideologies and credologies. They do not admit any unknowns either in the field of knowledge or in factors of human life. Hence being sure of the real content of good life they go on to propose definite forms of new life to be achived. This helps them in creating a science of human life and therefore easily a political science, because science deals more with structure than with substance. The role of the individual and his freedom only lies in accepting or rejecting it. If he accepts it he is on the winning side, if he rejects it he is on the losing or condemned side. He has no power to change its course, its inevitable coming, its emerging Kingdom or Commonwealth.

They do not believe in the idea of a slow and continuous amelioration or reform of human society leading to its gradual progress. They believe in a swift conversion or sudden revolution. They say you have to chose one path out of the two before you. They are only concerned with unmasking the dual hidden conflicts of good and evil, and state what is ultimately good and what is evil. They also regard these conflicts as inevitable stages in the unfolding of history which must be made to negate themselves by adopting the winning side or the on-coming tide or kingdom whose success is in-

evitable. There is no gradualism in their policy or methods. The new kingdom or commonwealth is to come through a coup d'etat of God or a negation developed by dialectical conflict. They believe in and expect the imminent end of the old world and the sure coming of the new which is immanent in history and is totally different and a complete break from the one existing. It is the Golden Age that is coming. Only its coming requires a period of rapid preparation and intensive purification or purging of the old. Their code of ethics and politics is not meant for all time but only to be taken as a policy or tactics for the transition period. The new order or commonwealth itself will be supra-moral, for all evil being overcome, ethics and politics become unnecessary. There will be established an ingrained instinct or habit of good behaviour or doing the right thing at the right time.

Thus this historical advance towards a new age proceeds by a conflict between two ideologies or credologies. The new world-to-be is at death grips with the old world-that-is. The new age arises amidst the destruction of the existing world order in a final catastrophe (a crucifixion or a revolution). There can be no truce or reconciliation of these mutually incompatible worlds. Only compulsion and war to the end with the old can usher in the new world. They both believe in an immanent teleology in history making for social progress. Man has to cooperate with it. He serves a destiny greater than himself. Divine will or dialectical necessity is the guiding and and moulding factor in life. The old order is evil, corrupt and morally unsound. Its standards and values are false. It is falling to pieces even before our own eys. When it is gone the people will come into their own. The oppressed, the humble, the poor, the exploited will throw off their chains in the fellowship and communion of an equalitarian society which would be the culmination of a period of historical development. The salient features of this new society would be an absence of self and property, of restraint and coercion of an abolition of classes and withering away of coercive institutions, and of the appearance of collective life and habits. It would be a "communion of the sacred." When such a stage is reached or brought about there will be no need of a science of a politics as there will be no problems of authority and freedom, security and protection,

It seems that though their kingdoms or commonwealths are in this world, they are not of this world. Having postulated or noticed dualism of what is and what ought to be in the human world and history and having diagnosed the causes of

of that dualism they want to eliminate them. According to them the greed of and for self and property is the real evil. Therefore it should be eliminated by a self discipline and surrender, or property control and surrender. This elimination will lead to the abolition of human conflicts, greeds and inequalities and raise man and society to higher level. In such a communist society even religion along with other coercive codes and institutions would disappear, not because it was incompatible with the principles of society but because it would be a hopeless anachronism and superfluity without any human significance or social necessity. Religion may be necessary when there is dualism in society between man's essential nature and needs, and his actual existence and conditions, in order to transform him from one, the temporary and transitional to the other, the essential and permanent. But once dualism and antagonisms, conflicts and classes are abolished there will be no need for these coercive codes, disciplines and institutions.

Let us now see how this ideal comnune, community or common-wealth would function. It is to be "an association in which the free development of each is the condition for the free development of all". "From each according to his ability, to each according to his need" (Marx). "The authority of the government over persons will be replaced by the administration of things and the direction of the processes of production" (Engels). "Complete self-government for the provinces, districts and communes, through officials elected by universal suffrage, the abolition of all local and provincial authorities appointed by the State" (Engels). "People will gradually become *accustomed to the observation* of the elementary rules of social life, known for centuries, repeated for thousands of years in all sermons. They will be *accustomed to their observance* without force, without constraint, without subjection, without the special apparatus for compulsion which is called the state." (Lenin). "The state will be able to wither away completely when society has realised the formula. From each according to his ability, to each according to his need. This is when people have become *accustomed to observe* the foundamental principle of social life, and their labour is so productive that they will voluntarily work according to their abilities. (Lenin). "That very soon the necessity of observing the simple foundamental rules of any kind of social life will become a *habit*." (Lenin). "When everybody without exception is able to perform the function of government, then every form of the state will completely wither away." (Lenin)

Both St. Augustine and Marx conceived of an early idyllic and ideal human community. But then there occurred a breach within it after the *fall of man* due to his vice of selfishness and greed, arising out of a desire for selfish aggrandisement and private property and personal enjoyment. It could not be healed by the old laws and systems. It required a new revelation or interpretation of human life and history, and a new conversion and revolution in human mind and society. They both believed that their millenia would succeed when the *habits* engendered by a new religious or productive system would supersede the old pagan or bourgeois virtues and hypotheses of individual rights and duties. They had no place for the rights and duties of citizenship based on the conception of state and individual.

Their interpretations are at once an epilogue and a prophecy, an epilogue to the past sufferings of men and a prologue and prophecy of the land of promise, they may hope to enter. There does not appear to be any room in their thought for any liberal or democratic system, or any need for the presence of continuous individual initiative. They wrote philosophies and preached new world orders which expressed in general the aspirations of men but did not fully take into account the deepest emotions and complex instincts of powerful men who made or gave turns to history. Their views of human nature are contradicted by the totality of historical facts. Their philosophies and forecasts have not stood the test of philosophical criticism as well as that of science and history. They have neglected a number of other factors in their determination of historical and social outlook. The impulses and drives of men cannot be referred or traced to any single source. There is love of power, rivalry, herd-instinct, desire for display as strong and vital as the greed for acquisition and possession among men, classes, societies and groups.

Thus they did not think of politics in terms of the problem of state authority and civic freedom, but merely as a means of promoting their own schemes of conversion and revolution in the existing societies which they thought and taught were undesirable and inevitably doomed to destruction and disappearance.

To St. Augustine, in the Church the new life came to the world. The temporal state did not represent or direct all the aspects of society. It was to be the servant of society. It withered away when Church took the ownership

of the temporal power and property on behalf of the whole Christian community or Respublica Christiana. So to Marx, in the classless Commonwealth the new life came to the world, and State withered away giving place to Community ownership of all power and property on behalf of the working class society or Respublica Marxiana.

Though ideologically different and opposed in their approach to the problems of mind and matter, their lines of thought and belief had much in common. In place of St. Augustine's will or law of God, the creator, Marx created an impersonal but rigid conception of an inexorable law of dialectics—a new Brahma guiding and controlling the process or course and conflicts of nature and human life. Like St. Augustine, Marx held a conception of determinism and predestination in life, to which free will was subordinated. They both did not give any independent place or initiative to man's energies and liberty but subordinated him to the will of God or the dialectical law of social development of a new world order and community or commonwealth.

NIRANJANĪ POETS OF HINDĪ [1]

By P. D. BARTHWAL, M. A., D. Litt.

The fact that the conference is being held in a place which is so distant from the Hindi speaking tract and yet so near Tiruvanantapuram, the birth place of the King-poet Śrī Rāma Varmā[2] of Kerala, known as "Garbha Śrīmān", who composed melodious songs of rapturous beauty in Hindi also, gives the honour you have done me, an added value in my eyes and makes me more grateful. Though the Garbha Śrīmān, who was born in 1815 A. D., belongs to the beginning of the modern age, the fact of his being a Hindi poet, reminds one of the great appeal that Hindi made in the olden times to some people of practically all parts of the country. In the present, we are only talking of Hindi as a medium of interprovincial communication but in the past it had in some measure really become one. According to D. C. SEN, "Hindi had already grown to be the *lingua franca* of all India" in the early Moghul period.[2] In Gujrat of the medieval times, to use the words of K. M. Jhaveri, it "was the recognized language of the cultured and the learned."[3] It was a prevalent fashion there to compose verses in Hindi. Even Premānanda (16th century), who on the admonition of his Guru, strove to create high class literature in Gujrati, began his literary life by composing verses in Hindi and directed his son Vallabha to follow the spirit of Hindi while writing Gujrati.[4] In Mahārāṣṭra such worthies as Chakradhar, (said to have flourished in the 13th century), Jnāneśvar and Nāmadeva who flouished in the fourteenth century and later, Ekanātha and Tukā Rāma considered it worthwhile to occasionally address to the Lord of their love and adoration the outpourings of their heart in

[1] Main part of the English version of the Presidential Address, Hindi Section, Tenth All-India Oriental Conference, Tirupati.

[2] Venkaṭeśvar : Nāgarī Prachāriṇī Patrikā, Vol. XVI, pp. 319—354. In the above paper of his Venkaṭeśvar has for the first time collected and published in Nāgarī characters thirty three Hindi songs of Rājā Śrī Rāma Varmā which he got from a Malayalam book of music and from the musicians of Malayalam territory. According to Venkaṭeśvar, again, the Rajā was taught in his childhood, Hindi also with other languages. He was born in a family of Vaiṣṇavas devoted to music and was himself a devotee and a lover of music. And, there is no doubt that Vaiṣṇavism and music had a hand in the spread of Hindi.—P.D.B.

[3] Sen: "History of Bengali Language and Literature", p. 600

[4] K. M. Jhaveri : "Milestones of the Gujarati literature", p. 66

Hindi.[5] Even Ibrāhim Ādil Śāh (Acc. 1637 A. D.) of Bījāpur composed his work on music entitled *Nava Rasa* in Hindi. Muhammad Kuli Kutub Śāh (reign 1519-1550 A. D.) of Golkuṇḍā, said to be the first poet of Dakkanī Hindustānī, preserved pure Hindi in some of his poems. But *Brajabuli* which D. C. Sen calls the "thoroughly Hindiized form of Bengali" and in which many poets composed beautiful songs, is the highest tribute to the spirit of Hindi. Govindadāsa's poems in this beautiful mixed language, could do honour to any literature.

But Hindi could not have attained this popularity in non-Hindi parts of the country, if it had no great literature of its own and no message that would appeal to the whole people, to deliver. Indeed, the greatness of our old literature is recognized on all hands. Not only Hindi, but the whole of India, prides in Sūrdās and Tulasīdāsa. But the regrettable fact is, that the whole range of our ancient literature has not come to full light. Indeed, the world is so much with us and we are so engrossingly living in the present, that we pay only lip service to our past. We rightly realize the necessity of giving encouragement to the new and rising literature. But it is hardly realized that the ancients, who have given their best to us and have thus deeply laid the foundations of the present in the past, have to be brought before the world, before the substantial realization of the glory that was Hindi's in the past, can come. The searches beign conducted by the Nāgarī Prachāriṇī Sabhā, show that there is no dearth of material. Only a fraction of our literaturs has yet seen the light of day. he rest is lying in manuscript form, and if it is not rescueTearly, most of the preciou material will be irretrievably losd as some has already been lost. As an instance in point, t, may mention only two of such works: the *Hajārā* of Kālidāsa I Trivedī and the *Gosāīṅ Charita*, a life of Tulasīdās by Benīmādhavadās. We know from the authority of Śiva Singh Seṅgar himselfs that thyy were in existence in his time. But now they are little more than mere names recorded in his *Saroja*. The library of Śiva Singh Seṅgar at Kāṅthā, Unnāva, U. P., which must have been a rich one, as is clear from the *Śiva Singh Saroja*, is said to be in danger of destruction. And the same may one day come true of the MSS in the possession of private individuals or even of public bodies,

[5] ibid, p. 125

[6] "Kośotsava Smārak Sangraha", N. P. Sabhā, Benares, pp. 92-98.

The need of the hour is, therefore, twofold: to collect the MSS at centres where they can be protected from the ravages of the forces of destruction and made easily accessible to the researchers and secondly, to get them gradually published.

We have got some MS libraries with public bodies as well as private individuals. Those with the former can very well be made the nuclei for bigger libraries. I may in this connection mention the Royal Asiatic Society library, the Āryabhāṣā Bustakālaya of the Nāgarī Prachāriṇī Sabhā and the Sangrahālaya of the Hindi Sāhitya Sammelan. The possessors of such libraries—most Darbars in the Rājpūtānā, Centeral India and other tracts prossess them, as do many Upāśrayas and Bhaṇḍārs—will be doing good to the cause of research, if they bring out catalogues of their MSS and conduct their libraries on modern lines.

The other and no less, perhaps more, important work is to get all the works that are and may be coming to light, published under good editorship. A periodical publication on the lines of the *Bibliotheca Indica* exclusively devoted to the publication of ancient Hindi literature, would be the best medium for the purpose. Nāgarī Prachāriṇī Granthamālā was for some time conducted on these lines.

Of course, these are huge undertakings and will require plenty of resources. But where there is will there always is a way, and if public bodies connected with Hindi take up the work in right earnest, they will find that the heart of man is always sound and never lets right causes die for want of support.

This twofold activity is necessary for facilitating the study both of language and literature. It will, even though the ancients, owing to the absence of voice recording devices in ancient times, cannot be brought in person to speak for the benefit of the linguist, open the whole field of observation that can be available for studying the behaviour of sounds, their association with sense and other cognate matters so far as Hindi is concerned, and will make it possible to follow the course of development the written language underwent during successive stages in its various subdivisions.

It will also lay bare to us the heart of Hindusthān as it throbbed through successive centuries since the rise of Hindi as a literature, because the Madhyadeśa or what is now roughly the Hindi speaking tract, has been the centre of most

of the cultural activities swaying the country. It will thus enable us to evaluate the contribution of the Hindi literature to the general culture. We will also be in a position to construct a complete history of the Hindi Literature. At present we can only claim to have an acquaintance with its main currents. But some of the ripples that they occasionally broke into, the undercurrents that they hid underneath and the crosscurrents that were sometimes thwarted by or engulfed in the main currents and were causes of complications, have not been fully detected, owing to the inaccessibility to the necessary material.

As an instance in point, I will draw your attention to one such subcurrent of the Hindi Literature which may be termed as the Niranjan current of Hindi Poetry.

As is evident from the name, the Niranjan current is also a spiritual current like the Siddha, Nātha and Nirguṇa currents. I have got in my possession extensive *Bānīs* of Haridās, Turasīdās and Sevādās Niranjanīs. I have also collected a few poems of Khemajī, Kānhardās and Mohandās. And, Manohardās, Nipaṭ Niranjan and Bhagvāndās have been mentioned in the *Śiba Singh Saroja*, Grierson's *Modern Vernacular Literature of Hindustan*, various *Search Reports* of the Nāgarī Prachāriṇī Sabhā and the *Miśra Bandhu Vinoda*. The extensive *Bānīs* of the first three in my collection give the sure impression that they form a sub-current and the poems of the others help to confirm the impression.

Rāghodās, the Dādūpanthī author of the *Bhaktamāl* (completed in 1770 v. s. or 1713 A. D.), a work written on the model of Nābhādāsa's work of the same name and to fill the gaps left by the latter, gives some information about the Mahants of the Niranjan Sect. He has mentioned twelve Niranjanī Mahants, and they include Haridās, Turasīdās, Khemajī, Kānhardās and Mohandās mentioned above.

Nipaṭ Niranjan was according to *Śiva Singh Saroja* born in 1650 v. s. Śiva Singh considered him as great a saint as the famous Tulasīdās. It is possible that Śiva Singh based the assumption regarding the date of his birth given above, on the date of composition given in one of the two books in his possession. Śiva Singh had two of his books, *Śāntarasa Vedānta* and *Niranjana Sangraha* in his possession. The first is still in the possession of a successor of Śiva Singh. The last pages of it are now missing. *Sant Sarasī* often attributed to him in histories is a mistake for *Śāntarasa Vedānta*, which had crept into the *Śiva Singh Saroja* itself, at least as it is printed (*Saroja*, p. 438).

Manohardās Niranjanī wrote *Jñānamanjarī*, *Jñāna Vachana Chūrṇikā* and *Vedānta bhāṣā*. The first was composed in 1716 v. s.[7] and the last also perhaps thereabouts.

Of these Haridās appears to be the earliest author. Rāghodās makes him the disciple of Prayāgdās, whom he, again according to Rāgho, left to enter the sect of Gorakhnāth. Sundardās, who held Prayāgdās also in great respect and knew him personally,[8] mentions Haridās as one of the great Gurus[9] like Gorakhnāth, Kantharnāth and Kabīr, which precludes the possibility of his having been initiated at the hands of Prayāgdās. The way in which Sundardās has made the mention, even suggests that he may have been earlier than Dādū (born in 1544 A.D.) and supports Jagaddhar Śarmā GULERI according to whom Haridās composed a number of works between 1520 and 1540 A.D. He is known as Hari Puruṣa in his sect.

GULERI gives the following list of his works—

1. *Aṣṭapadī yoga Granth,*
2. *Brahma Stuti,*
3. *Haridās Granth Mālā,*
4. *Hansa Pramoda Granth,*
5. *Nirpakha Mūla Granth,*
6. *Rāga Guṇḍa,*
7. *Pūjā Joga Granth,*
8. *Samādhi Joga Granth* and
9. *Saugrāma Joga Granth.*

In my collection I have got his Sākhīs and Padas.

Haridās resided in Dīḍvānā. Rāghodās is very loud in his praises of him. He calls him one who had no-hopes (निरास), had extinguished all desires and was always in communion with God in his heart, whom he had pleased by thought, word and deed.

But he also appears to have been short of temper. Rāgho speaks of him as Hara himself in wrath (हर ज्यूं कहर.) The commentary further speaks of him as having visited Pipari, Nāgore, Ajmere, Toḍā and Āmer where he is said to have performed various miracles.

[8] संबत सत्रह से माही वर्ष सोरहे माहि ।
वैशाख मासे शुक्ल पक्ष तिथि पूनो है ताहि ॥

[9] Sundar Granthāvalī, Intr., p. 78.

कोउक गोरष कूं गुरु थापत कोउक दत्त दिगंबर श्रादू ।
कोउक कंथर कोउक भर्थर कोई कबीरा के राखत नादू ॥
कोउ कहै हरदास हमार जु यूं करि ठानत बाद विवादू ।
भौर सु संत सबै सिर ऊपर सुन्दर के उर हैं गुरु दादू ॥ —सुन्दरविलास, १, ५

At another place, he mentions him as one of the famous saints fighting the battle of Spirit against forces of evil—

अंगद भुवन परस हरदासा ज्ञान गह्यो हथियार रे ॥

He pays homage to both Gorakh and Kabīr, both of whom had evidently influenced him through their *Bānīs*, and considers the former to be his Guru.

He was a vigorous writer and levelled trenchant criticism against the Siddhas and the Jains. He sang the glory of God who to him is both Nāth and Niranjan.

Like Haridās, Turasīdās was also a voluminous poet. I have got in my possession a huge collection of his *Bānī* containing his Sākhīs to theextent of 4202 couplets, padas 461 in number, four small compositions, called *Granthas*, namely *Granth Chau akṣari, Karanī Sār Jog Granth, Sādh Sulachhan granth* and *Granth Tatwa guṇabheda* and a few Ślokas and Śabdas.

He was a well read man. In the different Prakaranas of his *Sākhīs*, he has given detailed and sustained discourses on different topics concerning Bhakti, Yoga and Jñāna. Indeed, he was a great Bhakta but he was at the same time also a great exponent of the Niranjanīs' philosophical outlook, spiritual aspirations and mystic practices. Turasīdās was to the Niranjanīs, what Sundardās was to the Dādū panthis. Rāghodās has rightly spoken of the excellence of his Bānīs.[10] It is also possible that Rāgho in speaking of his Bānī meant his voice rather than his compositions. The verb ल्याये हैं (has brought) supports the latter interpretation.

According to Rāgho, he had attained the knowledge of Reality and withdrawn his heart from everything else.[11] Deed is the thing that shines at Turasī's place,[12] he says. His place of residence was Śerpur.

An MS of Turasidās's Bānī which has been noticed in the course of the search conducted by the Nāgarī Prachāriṇī Sabhā, contains also a copy of इतिहास समुच्चय[13] transcribed by one Turasīdās, the disciple of Ūdhodās's disciple, Lāldās in 1745 v. s. If this is in Turasī's own hand and there is nothing which would go to prove that it is not, we get the time of his floruit,

10 तुरसी जु वाणी नीकी ल्याये हैं ।

11 तुरसी पायो तत्त ग्यान सों भयो उदासा ।
तुरसीदास पायो तत नीकी बनि आई है ।

12 राघौ कहै करणी जित सोभित देषौ है दास तुरसी को अषारो

13 इति श्री महाभारथे इतिहास समुच्चये तेंतीसमों अध्याय ।३३। इति श्री महाभारथे संपूर्णं समाप्त । संबत् १७४५ वृषे मास कार्तिक सुदि ७ बार सनीवासरे। नगर गंधार सुथाने सुभमस्तु लिषतं स्वामी जी श्री श्री श्री श्री १०८ ऊधोदास जी को सिष्य स्वामी जी श्री श्री श्री श्री १०८ श्री श्री लालदास जी को सिष्य तुरसीदास बाँचे जिसको राम राम ॥

Rāghodās refers to him in the present tense. He must have been old enough to have attained such a great fame as a man of spiritual enlightenment. This also does not make his having transcribed a portion of the *Mahābhārata* in 1745 v. s. improbable. This makes him a junior contemporary of the famous Tulasīdās.

Mohandās, Kānhar and Khema were also good poets and show considerable grasp of spiritual knowledge. All the three were Mahants—Mohandās at Devapur, Kānhar at Chāṭsū and Khemdās at Śivahaḍī, all in Rajpūtānā. Kānhardās was so great a saint that Rāghodās considered him a partial Avatār. According to him, Kānhar had gone beyond the pale of the organs of sense, had conquered taste and took as food only what he got in alms. Though he was highly revered, he did not even get a hut erected for himself. He was much given to singing of the praises of God (प्रति भजनीक). Rāgho also thinks that he caused all who kept him company to be released from bondage (संगति के सबही निस्तारे). Of course, all the three flourished before Rāghodās (1770 v. s.)

Sevādās is, again, a voluminous Niranjanī poet. My collection of his Bānīs comprises 3561 Sākhīs, 402 Padas, 399 Kuṇḍaliyās, 10 small granthas, 44 Rekhatas, 20 Kavittas and 4 Sawaiyās.

He was a direct descendant in the spiritual line of Haridās Niranjanī. We have fortunately the *Sevādās parachī*, purporting to be a sort of versified biography of Sevādās in existence. It was written by his disciple's (Amardās's) disciple Rūpadās in v. s. 1832 on the twelfth day of the dark half of Baisākh. According to Rūpadās, Sevādās died in the year 1798 v. s. on the first day of the dark half of Jyeṣṭha and Kabīr was his Satguru. The *parachī* is full of miracles, which need not detain us.

Bhagavān Dās Niranjani, a disciple of the Nāgā Arjunadās composed *Prem Padārath*, *Amṛtadhārā*, *Bhartṛhari Śataka Bhāṣā Gītā Māhātmya* (1740 v. s.), *Kārtika Māhātmya* (1742 v. s.) and *Jaimini Aśvamedha* (1755 v. s.). The dates given above within brackets are given in the books themselves.

All these poets gave vent to their spiritual aspirations and achievements in songs unadorned by artifical devices, whose simple beauty is very impressive. Some of them whose extensive Bānīs I have read, claim to have reached the highest peak of spiritual enlightenment by merging their individual being in the Universal Being. The path that led them to this height,

is just like the Nirguṇis' path, a backward journey. The outward flow of mind which creates the world, the circumstance that limits our real unlimited nature, has to be withdrawn and made to flow inwards. The process of *sanchara*, so to say, has to be turned into *prati sanchara*, before the final salvation can come. It is therefore that Haridās went in for making the river *flow back* to its source,[14] and recommended the *backward path* to the traveller intending to reach Truth.[15] Sevādās requires one to *dive back* if one wants to gradually go beyond the pale of the three guṇas, the organs of sense, mind and speech and have the acquaintance of the invisible God within.[16] And Turasī says, when one *turns back within*, then alone does the aspirant become aware of the (spiritual) path.[17]

This backward path of the Niranjanis is mainly, a path of Yoga vitalized by intense love and devotion. The whole occult technique of the Nirguṇīs is present in them. They aim at finding the Suṣumnā between the Iḍā and Pingalā where the successful aspirant hears the Anāhatanāda, has the direct vision of the Niranjan and drinks through the Bank nāli[18] in the Śūnyamanḍal, the spiritual elixir.

The thread that constantly joins them with Truth, is the remembrance of name, the *nāmasmaraṇa*, in which yoga and love join hands. It is a loving remembrance in which the aspirant's whole being has to join accompanied at the same time with what is called Trikuṭī-Bhrikuṭī or Triveṇī-abhyāsa, and what approximates to the Bhrūmadhya dṛṣṭi of the *Gorakṣa paddhati* and the *Gītā*. This practice which involves the Surati or inward attitude, the mind and the breath at the same time, has been referred to by the Niranjanīs over and over again. The highest stage in the practice is reached when with every inspiration and expiration of breath the name is automatically repeated, and the whole being of the aspirant becomes a continuous prayer.

The love element in the Niranjan poetry is no less pronounced than the Yoga element. The senses submit to no forceful suppression. It is only by making them drink of

[14] उलटी नदी चलाणेंगे ।

[15] उलटा पंथ संभालि पंथी, सति सबद सतगुरु कहै ।

[16] सहजि सहजि सब जाहिगा गुण यंद्री मन बाणि ।
तूं उलटा गोता मारि करि अंतरि अलख पिछाणि ॥

[17] जब उलटा उर माँही आवै तब भल ता मघ (? ग) की सुधि पावै ॥

[18] सुमिरण डोरीसाच की सतगुर दई बताय ।—सेवादास

love that they can be brought under control. Haridas takes the careless aspirant to task for not doing so.[19]

In order to merge in the Universal Soul, the individual soul has to be filled all over with an intense and all consuming love of the devoted wife to her lord, which urges complete self surrender without wishing for any recompense and compels acceptance.[20] They have all poured out the woes of their heart like wailing wives suffering the pangs of separation.[21]

It is this element of love that according to Turasīdās, should be the vital part in every spiritual path. With it every path is true and conversely, without it every path devoid of essence.

Of their direct ineffable experienee, too, which at the successful end of the spiritual journey, comes upon one like a blinding torrent of effulgence and stays on after stabilization (or jarṇā) like a cool flickering light, and which seems

[19] पाँच राषि न पेम पीया दसौं दिसा कूं जाहिं ।
देषि अबधू अकलि अन्धा अजहुं चेतै नाहिं ॥

[20] मैं जन बाँध्यों प्रीति सूं ॥
निकट बसौ न्यारा रहौ एक मंदिर माहिं माधवे ।
कै मिलि हौ कै तन तजौं अब मोहिं जीवण नाहिं माधवे ॥
प्राण उधारण तुम मिलौ,
अबला मनि व्याकुल भई तुम क्यों रहे रिसाइ माधवे ।—हरिदास
सुरति सुहागणि सुन्दरी, बस्यौ ब्रह्म भरतार ।
आन दिसा चितवै नहीं, सोधि लियौ करतार ॥—सेवादास

[21] हरिदास—
अंतरि चोट विरह की लागी नष सिष चोट समाणी ॥
तुरसीदास—
कोउ बूझौ रे बाँभना जोसी कहि कब आवै मेरा राम ।
विरहिन झूरै दरस कूं जिय नाहीं विश्राम ॥
ज्यूं चात्रिग घन कूं रटै पीव पीव करै पुकार ।
यूं राम मिलन कूं विरहिनी तरफै बारंबार ॥
प्रेम भक्ति बिन जप तप ध्यान रूखे लागें सहत बिग्यान ।
तुलसी प्रेम भक्ति उर होय । तब सब ही मत साँचे जोय ॥
अनंत सूर निकट नूर जोति जोति लावै ।
नैना माहीं राम जी झिलमिल जोति प्रकास ।
त्रिकुटी छाजा बैठिकरि को निरषै निज दास ।
बिन घन चमकै बीजली, तहाँ रहै मठ छाय ।
हरि सरवर तहाँ बोलिए जहाँ बिण कर बाजै बीण ।
बिन बादल वर्षा सदा तहाँ बारा मास अखंड ।

to resolve all apparent contradictions and is itself expressed in contradictory terms, they have the same things to say as the Nirguṇīs. The Guru joins the light (within him) with light of endless suns, says Haridās.[22] Sevādās sees the flickering light in the Trikuṭī.[23] The spiritual experience is like the flash of lightning without clouds, like playing on the vīṇā without hands and like rain without clouds, in the words of Sevādās.[24] It is like the deaf hearing the secret talk not involving mouth (tongue), the lame climbing the tree where the one having feet cannot climb and like the blind seeing the light, to quote Turasīdās.[25]

In all things spoken above, there is similarity between the Nirguṇīs[26] and the Niranjanīs. It is therefore that Rāghodās speaks of them as having the same attitude of mind as was Kabir's. But in spite of this he has treated them as a class apart without counting them among the Nirguṇīs like Kabīr, Nānak and Dādū. And the reason appears to be that even with all this similarity there is some dissimilarity between the two.

Kabīr carried war against the gross forms of worship and condemned the iniquities of the social order of the Hindus outright. The Niranjanīs also oppose idolatry, Avatār worship and rituals as methods to be followed by them to attain salvation. But they also held a complacent attitude towards them as forms of worship to be followed by the ordinary people who are evidently not supposed to have such high spiritual aspirations as the Niranjanīs. It is, therefore, that Haridās has instructed his disciples to worship Govinda without being either inimical to the temple or in love with it.[27] Turasī sees the imageless in the image also, though as an argument for rising above it, and considers āchār, the formality of ritual etc., to be of some redeeming value after all.[28] They con-

[25] बहरा गुभि बानी सुनै सुरता सुनै न कोय ।
तुरसी सो बानी अघट मुष बिन उपजै सोय ॥
पंग उठि तरबर चढै सपगै चढया न जाय ।
तुरसी जोती जगमगै अंधे कूं दरसाय ॥

[26] For the Nirguṇis' view-point see Barthwal: 'The Nirguṇa School o. Hindi Poetry', Indian Book Shop, Benares.

[27] नहिं देवल सूं बैरता, नहिं देवल सौं प्रीति ।
किरतम तजि गोविंद भजो, यह साधो की रीति ॥

[28] मूरति में अमूरति बसै अमल आतमाराम ।
तुरसी भरम बिसराइ कै ताही को लै नाम ॥

जाकै आचार हूं नहीं, नहीं बिचार भहलेस ।
उभै माहिं एक हु नहीं भुग भुग ताकौ बेस ॥

sider the Varṇāśrama, to use the words of Turasī, an attribute of the body and not of the spirit, but do not appear to entertain any wish to stand in antagonism to the traditional social discipline, though they do want that the world should live like a universal fraternity and no distinction of caste and creed should be made the basis for the distiction of high and low.[29]

This attitude places the Niranjanīs by the side of the earlier saints like Rāmānanda and Nāmadeva. The latter bent before the image of Viṭhobā to address his prayers to the invisible God.[30] The former who declared the images and the *tīrthas* to be mere stones and water, is said to have prescribed the worship of Śālagrām. It is this tendency, perhaps, that made Bhagvāndās, a later Niranjanī to compose works like *Kārtika Māhātmya* and *Jaimini Aśvamedha.*

It is probable that it was through Rāmānada that both the love and yoga elements came to the Niranjanīs. They are present in the works of most of his disciples like Kabīr, Raidās and Pīpā for which the common source must be seen in the Guru. This view is supported by poems like *Jnāna tilak* and *Jnāna līlā* attributed to Rāmānanda as also by *Siddhānta paṭal.* According to this last work, in the *upadeśa* given by Rāghavānanda to Rāmānanda, yoga certainly features.[31] In Mahārāṣṭra legends connect Rāmānanda with the Nāthpanthī family of Jñānadeva. Uddhava and Nayan, who call themselves Nāthas, trace their origin to Rāmānanda through his disciple Anantānanda.

As for the love element, we would not have been able to understand what in reality the *daśadhā bhakti,* of which according to Nābhāji all the twelve disciples of Rāmānanda were abodes, is, but for the clear explanation of it found in the *Bānī* of Turasīdās Niranjanī which it would not be out of place to give here in brief.

[29] तुरसी बरणाश्रम सब काया लौं, सो काया करम को रूप।
करम रहत जे जन भये ते निज परम अनूप ॥
जन्म नीच कहिये नहीं जो करम उत्तम होय।
तुरसी नीच करम करै, नीच कहावै सोय ॥
जनम ब्रह्मन भये का भयौ करम कृत चंडार।
बहुरि पिंड परैं होयगा सुद्र घरहु अवतार ॥
हिंदू तुरक एक कल लाई, राम रहीम दोइ नहिं भाई ॥—हरिदास

[30] Farquhar : "Outlines of Religious Literature in India." p. 300

[31] शब्द सरूपी श्री गुरु राघवानंन्द जी ने श्री रामानंद जी कूं सुनाया भरे भंडार काया बाड़ त्रिकुटी अस्थान जहँ बसे शालिग्राम।—अमर बीज मंत्र १७।

Turasīdās has, in this explanation, given the names of the nine aspects of the Saguṇī's *navadhā bhakti* a new content in keeping with the absolutist outlook of the Nirguṇīs and Niranjanīs. Thus besides *śravaṇa,*[32] *kīrtanā* and *smaraṇa*[33] which can easily be fitted to the absolutist attitude, *pāda sevana*[34] is the mental service to the feet of the effulgent Lord residing in the Hṛdaya-lotus, *archana*[35] is seeing the image of OM in the whole universe, *bandana*[36] is to consider the Sādhu, Guru and the Lord, as one and to salute them, *dāsya*[37] is the disinterested service of Hari, Guru and Sādhu, *sakhya*[38] is not the proud feeling of equality with God but the feeling of friendly affinity with Him engendered by the belief that all attitudes lead to Him, and *ātma-nivedana*[39] is the spirit of humility. This is said to be the *navadhā bhakti* which leads to *nivitti* as opposed to the *navadhā bhakti* leading to *pravṛtti.*[40] Adding to it the *Premā*[41] state which is the crown-

[32] सार सार मात श्रवन सुनि, सुनि राषै रिद मांहि ।
ताहि को सुनिबौ सुफल, तुरसी तपति सिराहि ॥

[33] तुरसी ब्रह्म भावना नाम कहावै सोय ।
यह सुमिरन संतनि किय: सार भूत संजोय ॥

[34] तुरसी तेज पुंज के चरन वे हाड़ चाम के नांहिं ।
वेद पुराननि बरनिए रिदा कँवल कै मांहि ॥

[35] तुरसी प्रतिमा देखि कैं पूजत हैं सब कोय ।
अदृसि ब्रह्म को पूजिबौ कहौ कौन विधि होय ॥

तुरसीदास तिहूँ लोक मैं प्रित्मा (प्रतिमा) ॐकार ।
वाचक निर्गुन ब्रह्म कौ वेदनि बरन्यौ सार ॥

[36] तुरसी गुर गोविंद संतनि विषै, अभिन भाव उपजाय ।
मंगल सूं बंदन करै तो पाप न रहई काय ॥

[37] तुरसी बनै न दास कूं आलस एक लगार ।
हरि गुर साधू सेव मैं लगा रहै यक तार ॥

तुरसी निहिकामी निज जनन की निहि कामी होय सोय ।
सेवा निति करयौ करै फल बासना जु षोय ॥

[38] बराबरी को भाव न जानै । गुन औगुन ताकौ कछू न आनै ॥
अपनौ मित जानिबो राम । ताहि समरपै अपनौ धाम ॥

तुरसी त्रिभवन नाथ कौ, सुहृत सुभाव जु एह ।
जेनि केनि ज्यूं भज्यो जिनि तैसें ही उधरे तेह ॥

[39] तुरसी तन मन आतमा करहु समरपन राम ।
जाकी ताहि दे उरन होहु छांडहु सकल सकाम ॥

[40] एक नौधा निरवरति तन एक परवरति तन जान ।
तामें अति कन रूपनी ताका करहिं बषान ॥

[41] तुरसी यह साधन भगति तर लौं सींची सोय ।
तिन प्रेमा फल पाइया प्रेम मुक्ति फल जोय ॥

ing result of and the justification for going through, all the above nine aspects, we have the *daśadhā bhaktī* of Nābhājī.

Within the short time at my disposal, I have attempted to place before you among other things, only a bare outline of the contribution made to the Hindi literature by the Niranjanīs. I need hardly say, it was saints such as these, the sincere outpourings of whose heart enriched the Hindi literature in no mean measure that helped to make Hindi in medieval times the language of spiritual communion in North India. No tribute paid to their sacred memory can be too high.

With the discovery of fresh material, other so far unknown currents will gradually come to light. Even the discovery of individual authors will go to show the richness of the currents they belong to, and through them, of the literature as a whole.

INDIA'S CONTRIBUTION TO THE SCIENCE OF CLASSIFICATION

By B. N. BANERJI, M.A., D.L. Sc.

IN this paper I propose to discuss in short *firstly* the science of classification as developed in India in ancient days, mentioning incidentally the work done in other countries; *afterwards* I shall deal with the systems of book-classification evolved in modern times, first in the west, and then in the east as well; and shall *finally* dwell at some length on the two distinct contributions made by India in recent years in the form of original systems of book-classification, *viz.*, (1) S. R. RANGANATHAN'S *Colon classification* and (2) S. C. GUHA'S *Oriental classification* called "Prāchya-vargîkaraṇa-paddhatī"—the former appearing first in 1933, afterwards in a revised edition in 1939; and the latter first as a paper in volume 9 of the *Sarasvati Bhavana Studies*, Benares, 1931, and subsequently also in book-form in 1932.

I) ANCIENT WAYS

The *srutis* divide *vidyā*, knowledge, into two main classes, *parā* and *a-parā*: द्वे विद्ये वेदितव्ये पराचैवापराच. Kaṇāda mentions three *vargas*, classes—*dharma*, *artha* and *kāma*—which are followed by KĀLIDĀSA in his *Kumārasambhava*, as being the three objects of worldly existence. A fourth varga, termed *moksha*, is afterwards added and in most ancient literature 'chaturvarga' (four classes) is found mentioned.[1]

Other important classifications are those found in the *smṛtis* and *nītiśāstras*. The former speak of 14 classes and the latter give 32. *Arthaśāstra* admits four divisions and Pāsupatāchārya five. Four vargas are however generally accepted so far as classification of subjects are concerned.

The *kalās* (arts) are mainly 64 in number, as Vātśāyana in his *Kāmasutra* and other authors have mentioned. Altogether we have as many as 528 arts. There are various other classifications also and any reader of ancient literature will find that our ancestors did not ignore the science and art of classification. The University libraries of Nālandā, Vikramaśīlā, Takṣaśīlā, Odantapuri and the temple libraries of the various pīthas were evidently kept in classified form.[2] Private libraries of here-

[1] "Ancient view of classification" by S. C. GUHA in the *Kane Commemoration volume*, Poona, 1941, p 206.

[2] "On classification of books in our libraries" by S. C. GUHA in the *Educational Review* (Madras) August 1921.

ditary pandits are also often found classified. Even to-day we find the manuscripts in the possession of descendants in separate bundles according to classes.

In Sanskrit *vargīkaraṇa* is the word for classification, *varga* technically signifying a. class. The four vargas, generally accepted on all hands, as we have seen, are dharma, artha, kāma and moksha.

From a theoretical point of view *vidyā*, or knowledge as represented in written literature, can be divided into three categories, as BACON has shown in the west—one pertaining to Reason, another to Memory and the third to Imagination. Work of reason is Philosophy, that of memory is History; and the work of imagination is either (*a*) History in narrative form, often with exaggeration, elevated afterwards to the dignity of epic literature ; or (*b*) History in visual, illustrative or dramatic form ; or (*c*) History in figurative form, full of allegory or parable with a view to popularise morals.

From reason evolves philosophy, *darśana*, literally, seeing, observing. The seers were not very few. The six main systems of philosophy evolved in the country in ancient times and well-known, to-day all the world over are (1) *Sānkhya* system of KAPILA, (2) *Yoga* system of PATAÑJALI, (3) *Nyāya* system of GAUTAMA, (4) *Vaiśeṣika* system of KAṆĀDA, (5) *Pūrva-mīmāmsā* system of JAIMANI and (6) *Uttara-mīmāmsā* or *Vedānta* of VYĀSA. Besides there are several other systems, some with quite independent footing, such as Bauddha, Jaina, Śaiva-siddhānta, etc.

As to religious faiths India has a fundamental basis that comprises all probable forms and faiths of religion, from Monotheism to Pan-theism. Even atheism is not discarded altogether in the system of *moksha-śāstra*, consisting of philosophy and religion. India's outlook on life being rather comprehensive it admits of a series of stages of evolution that will never ignore the. seemingly unimportant or unnecessary. With regard to the sciences and the arts we have had from the earliest times elaborate lists showing minute classification. As to the science of language and forms of literature we have hardly an end.

II) MODERN METHODS

In the west theoretical classification proper perhaps began with Bacon. Many an attempt at finding a convenient system was also made. The famous Alexandrian library was classified by CALLIMACUS about the year 250 B.C. W. T. HARRIS's scheme, 1875 A.D., is considered to be one of the earliest

methods. In France Gustav BRUNNET's *Manuel du libraries* was in vogue in early days. Of the modern methods those of BROWN's *Subject classification*, CUTTER's *Expansive classification*, DEWEY's *Decimal classification* and the *Library-of-Congress* (U.S.A.) *classification* are well-known.

On the basis of the schemes in vogue in the west India had adapted suitable combined forms of book-classification in the latter part of the nineteenth century and after. The Imperial Library of Calcutta had one of the earliest elaborate adaptations of the western systems. Some originality was however shown in Baroda early in the present century. In 1911, under the American librarian, Mr. William Allaston BORDEN, the State of Baroda had its first scheme of classification. It adopted the 26 letters of the Roman alphabet as notation for the main classes. Since then Janārdan S. KUDALKAR, also of the Baroda Library Department, had his Marāthi classification, using the standard Indian alphabet instead of the Roman for the initial symbols. Afterwards Gujarāti and other forms were also prepared on similar lines.

In most libraries outside Baroda, India had been trying to adopt or adapt DEWEY's *Decimal classification* in many a place. Some favoured a strict adoption of DEWEY, which was then being largely used in America, Europe and also in some eastern countries, such as China, Japan and the Philippine islands; while others made an experiment at adapting DEWEY to Indian requirements. The former course was taken particularly by the Panjab under the American librarian, Asa Don DICKINSON as University Librarian for a time.

It was however afterwards found that a thorough adoption was hardly possible in eastern countries in general and India in particular. Even Secretariat and Governmental libraries in the country felt the difficulty. Experts in India were generally of opinion that we should have rather a special classification which could be standardized in the country. Library Associations stressed upon the need, and at last the sixth session of the All-India Library Conference, held in December 1928 at the Senate Hall of the Calcutta University, decided upon devising a scheme of classification suitable for Indian and oriental libraries. A Committee of experts was formed,[3] but the same

[3] The Committee consisted of 14 members: "(1) S. C. Guha, (2) P. K. Mukerji, (3) Labhu Ram (4) Y. V. Ç. Iyah, (5) A. C. Vidyabhushan, (6) A. R. Rao, (7) T. R. Rao, (8) S. R. Ranganathan, (9) N. M. Dutt, (10) P. N. Raina, (11) Md Shafi (12) Y. Ahmed (13-14) D. T. Rao and I. V. Ramanayya. *Vide* Report appearing in *The Indian Library Journal*, 1929.

had hardly an opportunity to meet. Two of the members, however, viz., '(1) S. C. GUHA' and '(8) S. R. RANGANATHAN' individually worked out independent schemes. Mr. GUHA published his scheme, first as a paper in vol. 9 of the *Sarasvati Bhavana Studies* in 1931 and next year in book-form with an introduction by MM. Āchāryā Gopināth KAVIRAJ, M.A., then Principal of the Government Sanskrit College, Benares. Mr. RANGANATHAN's scheme was published by the Madras Library Association in 1933 and has been successfully tried at the Madras University Library under his own librarianship, and since then adopted at several libraries in the Province. Mr. GUHA's scheme has also been adopted at some libraries in Upper India, including the Library of All-India Congress at Allahabad. The Kāshī Vidyāpitha in Benares, the State Library of Bikaner, Central Public Library in Karachi and some others have partially used his scheme.

As these two schemes are both distinctly original and differ greatly from others evolved in India or elsewhere in recent times, it will be worth-while to study them at some length. The Baroda schemes of earlier times, viz., BORDEN's *Scheme of classification for libraries in Baroda State*, 1911, and KUDALKAR's *Marathi-pustakansathin Vargikaraṇapaddhati*, 1916, also show some originality, but they as also some others in the country are more or less adaptations of the systems in vogue in the west. The earlier schemes such as those used in the Imperial Library and the Secretariat and University and Public libraries are also hackneyed, being copy or adaptation of the British Museum and other important libraries in the United Kingdom.

III) INDIAN CONTRIBUTION : CLASSIFICATION

Classification is the putting together of similar things. Library-classification or book-classification is the practical application of the science of classification by means of symbols primarily to denote subjects dealt with in books or written literature, and secondarily also to individualize books in a class, sub-class, section or sub-section. The two sets of symbols are called "Class Number" and "Book Number" respectively; and the both together are termed "Call Number" of a book by which the book is conveniently called by library-workers or users. The scope of a system of book-classification is therefore mainly to symbolize subjects relatively placed. The test of a system is in its practical usefulness and workability with average intelligence.

Let us now see how either of the recent Indian contributions, namely, *Colon classification* and *Oriental classification* fulfils the aim of book-classification and whether they are improvements on the existing methods in the world.

(a) COLON CLASSIFICATION

The most striking feature of the *Colon* scheme is its not assigning a ready-made class-number to topics in general, except in the initial stage of forming the notation. (For broad topics however practically a ready-made set of class-numbers is there). Certain 'Standard unit schedules' are provided, by an intelligent application of which Class-numbers are to be formed. The author compares this operation to the handling of a Meccano apparatus, and calls the 'Standard unit schedules' as the 'pieces' in the Meccano set. "Even a child knows, that, by combining these standard pieces in different ways, many different objects can be constructed. So also, by combining the classes in the different unit schedules in assigned permutations and combinations, the Class-Numbers of all possible topics can be constructed. In this scheme the function of the colon (:) is like that of the bolts and nuts in a Meccano set." (*Vide* Author's Introduction, page 1.12 of edition 2, to *Colon classification*, 1939, as also his *Prolegomena to library classification*, 1937, pages 135-9).

The notation used is not 'simple' but 'mixed' or complex, but the author being a mathematician, has been able to give it quite a simple nature like that of the decimal figures, assigning gradual values to the symbols in the ascending or descending orders of their relative importance or absolute magnitude. The symbols constituting the notation used in constructing the Class-Numbers are to be taken in the following ascending order of their absolute magnitude :—*a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z* ; 0, : ; —; 1,2,3,4,5,6,7,8,9; A,B, C,D,E,F,G,H,I,J,K,L,M ; △ ; N,O,P,Q,R,S,T,U,V,W,X,Y,Z. (*Vide* Chapter 02, Article 4, on page 1.22 of edition 2). The symbols quoted above are as many as 65 in number. It will be seen that the author, having exhausted the Indo-Arabic numerals and the whole field of the Roman alphabet, comprising Capital and Small letters, had to take recourse, in the 2nd (1939) edition, to one triangular sign, viz, △ (delta), the fourth letter of the Greek alphabet.

The main classes, having 'ready-made' class notation, are divided into 4 parts. (1) Generalia, denoted by the numerals 1 to 9 (page 2.21), the figures being treated decimally ; (2)

Sciences, denoted by the letters *A* to *M* of the Roman alphabet; (3) Spiritual experience and mysticism, denoted by the Greek letter Δ ; and (4) Humanities, denoted by *N* to *Z*, the rest of the Roman letters. Of this last the letters *U* to *Z* stand for "subjects that deal with 'Man in society' " (page 1.32) the other humanistic subjects being represented by *N* to *T*.

The Classes are the following in the main :

SCHEDULE 1 : MAIN CLASSES

Generalia (Figures read decimally)

1 Bibliography
2 Library science
3 Dictionaries, encyclopaedias
4 Societies
5 Periodicals
61 Congresses
62 Commissions
63 Exhibitions
64 Museums
7 Biographies
8 Year-books
9 Works, essays
91 Theses

Sciences and their application

A Science (General)
B Mathematics
C Physics
D Engineering
E Chemistry
F Technology
G Natural science & Biology
H Geology
I Botany
J Agriculture
K Zoology
L Medicine
M (Other) applications of sciences, Useful arts

Spiritual experience

Δ Spiritual experience and Mysticism

Humanistic Subjects

GENERAL

N Fine arts
O Literature
P Linguistics
Q Religion
R Philosophy
S Psychology
T Education

MAN IN SOCIETY

U Geography
V History
W Political science
X Economics
Y (Other) social sciences including Sociology
Z Law

SCHEDULE 2 : COMMON SUBDIVISIONS

a Bibliography
b Profession
c Laboratories, observatories
d Museums, exhibitions
e Instruments, formulas
f Maps, atlases
g Charts, diagrams, guide-books
h Institutions
j Memorial volumes
k Cyclopædias, dictionaries, concordances
l Societies
m Periodicals
n Year-books, directories, calendars, almanacs
p Conferences, congresses
q Bills, acts, codes
r Periodical reports of government departments and other corporate bodies
s Statistics
t Commissions, committees
u Surveys, explorations, expeditions
v History
w Biography, letters
x Collections, selections
y Scope, syllabus, synopsis
*y*1 Scope
*y*2 Syllabus, Synopsis, outline
*y*5 Catechism
*y*7 Case study, observational study
*y*8 Experimental work
z Digests
*z*4 Parodies
*z*5 Adaptations
*z*61 In verse
*z*62 In dramatic form
*z*63 In the form of fiction
*z*64 In the form of letters
*z*7 Symposia, essays, lectures
*z*9 [? ':9'] Criticism, application

(Pages 2.4 & 2.5 of ed. 2 of *Colon classification*; or pages 15-6 of *Madras Univ. Lib. catalogue supplement*, 1938, Schedule 2).

[Examples: Symbol 'A*a*' represents Bibliography of Science; 'B*a*' does that of Mathematics; 'C*c*' Laboratory for Physics, and 'Q *z* 63' Religion in the form of fiction, etc.]

In addition to the 'Standard unit' schedules—two of which, viz., *Main classes* and *Common sub-divisions*, we have already seen—the Colon scheme has shown *Eight devices* to be employed as a connecting apparatus in constructing a class-number. The Eight Devices are the following:

(1) Colon device (or use of a colon ':' between parts of a Class-number to indicate different trains of characteristics forming the basis of classification ;

(2) Geographic device (or a ready-made Geographical number to identify a subject with the place it is associated with);

(3) Chronological device (or use of an appropriate chronological number to denote the year of origin and publication);

(4) Favoured category device (to bring in forefront certain categories of local or special importance);
(5) Classic device (to bring together different editions, commentaries, etc. together);
(6) Subject device (or use of appropriate class-number for further sub-division);
(7) Alphabetic device (or use of initial letters to facilitate library work); and
(8) Bias number device [to bring together all books written with a particular *bias* or point of view by putting the digit 'O' (or a dash "—" in the case of Auto-bias) in between, instead of a colon].

Of the first two schedules (viz., 1: Main classes, and 2: Common sub-divisions) we have already spoken. Of those of *Geographical* and *Chronological* divisions we have an idea in Devices 2 & 3 in the *Eight devices* mentioned. There is still another schedule called "*Language Divisions*" giving an arbitrary number to every member of the family of languages.

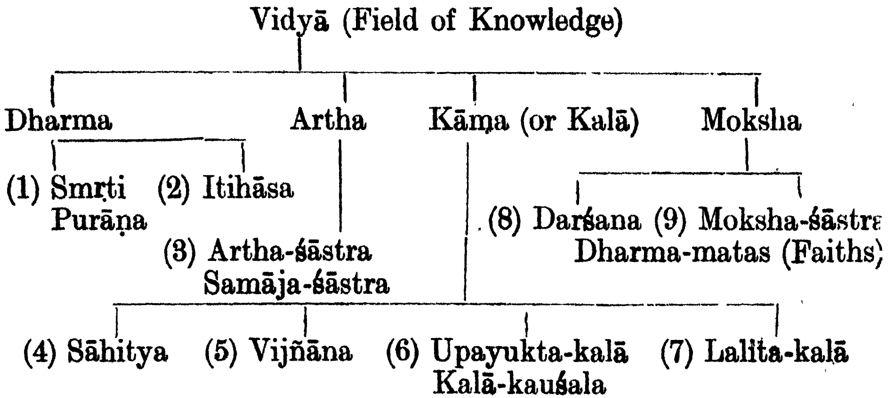
With the permutations and combinations of the Schedules influenced by the particular point of view taken, and applying one or more of the devices provided, class-numbers in the *Colon* scheme are formed. For the book-number the system has taken the easy and useful step of depending primarily on the chronological device. By way of example of a call-number let us cite the number assigned to the very work *Colon classification:* It is "251 *q* N33 / G9"; 2 stands for Library science under Generalia (1-9); 25 Technical library service; 251 Classification; *q* stands for Codes (*Vide* Common sub-divisions); N33 is 1933 A.D. (Chronological division) in which year the the book is first published. Finally the Book-number is represented by G9 (1939, according to Chronological table for book-number) the year of publication of the volume.

(b) ORIENTAL CLASSIFICATION

Unlike *Colon* the *Oriental* scheme (Prāchya-vargîkaraṇa-paddhati) has adopted rather a ready-made class-number, in the main, following on the footsteps of predecessors. In order, however, to fulfil particular requirements the scheme has provided certain contrivances by way of a series of tables to be used in proper combination whenever necessary. When a topic has to be shewn in its special reference to another it can be done by means of insertion of the sign colon (:) in between the particular symbols, as we shall see later. The notation in the *Oriental* is rather simple decimal like DEWEY's, the difference

being that it admits of only one hundred main sections instead of the one thousand in DEWEY. The sign colon (:) and some other symbols are however often used.

The *Oriental* builds up its scheme on the traditional four vargas, dharma, artha, kāma and moksha. The following tabular form will give an idea of the sequence:



It will be seen from the above table that we get 9 bhāgas, each being denoted by one of the 9 integers, 1 to 9; in addition there is the extra bhāga ('Sarva varga', *generalia*) denoted by O (zero). Each of the ten bhāgas thus obtained may undergo a process of tenfold differentiation, resulting in the formation of one hundred Vibhāgas or sections. Each such section is denoted by a figure of two digits, as shewn in the *Outline* that is shortly to follow. The process of tenfold differentiation can be repeated as often as desired, putting a decimal point after the two-digit figure assigned to a vibhāga. Thus a fractional addition can be made to a section almost to an unlimited extent.

All this is Subject-notation, each one consisting of a two-digit figure with or without additional decimal fraction. For a small general collection of books of no special character the one hundred vibhāgas, without decimal fraction, may suffice; but minute classification will require the additional fractions to be used lavishly.

Following will be found (1) Outline of the main classes, shewing the hundred vibhāgas, *as given in the first two columns*; (2) Kāya-nirṇaya or Features-differentiation table, shewing the ten possible forms of a subject, *columns 3-4*; (3) Regional table, *col. 5-6*; (4) Philological table, *col. 6-8*; (5) Anthropological (or Socio-religious community) table, *col. 8-9*; (6) Chronological table, etc., *afterwards*. Besides, there is one Dṛṣṭinirṇaya ('Point-of-view'-indicating) device, which is made by the use of a double colon.

1) OUTLINE OF CLASSES

SHEWING 100 VIBHAGAS OR SECTIONS

00 GENERALIA
01 Exposition
02 Library science
03 Cyclopædias
04 Other reference works
05 Periodicals
06 Societies
07 Newspapers
08 Collected works
09 Gazetteers, Bluebooks

10 DHARMAŚĀSTRA
11 Smṛti
12 Lawgivers
13 Ethics
14 Law
15 Rāmāyaṇa
16 Mahābhārata
17 Purāṇas
18 Upa-purāṇas
19 Other

20 HISTORY
21 World
22 Asia *except India*
23 India
24 Africa
25 Europe
26 America
27 Other
28 Geography - Travel
29 Biography

30 ARTHAŚĀSTRA
31 Statistics
32 Politics
33 Economics
34 Sociology
35 Administration
36 Societies
37 Education
38 Commerce
39 Custom - Costume

40 LITERATURE, Philol.
41 Poetry
42 Drama
43 Novel
44 Short story
45 Prose literature (genl.)
46 Rhetoric
47 Correspondence
48 Satire
49 Philology (Linguistics)

50 SCIENCE
51 Mathematics
52 Astronomy
53 Physics
54 Alchemy (Chemistry)
55 Geology
56 Paleontology
57 Biology
58 Botany
59 Zoology

60 USEFUL ARTS
61 Medicine
62 Engineering
63 Agriculture
64 Domestic science
65 Labour-saver
66 Manufacture
67 Mechanic art
68 Building
69 Other

70 FINE ARTS
71 Oriental (special)
72 Architecture
73 Sculpture
74 Drawing - Design
75 Painting
76 Engraving
77 Photography
78 Music
79 Amusement

80 PHILOSOPHY
81 Nyāya-Vaiśeshika
82 Sāmkhya-Yoga
83 Mimāmsā
84 Vedānta
85 Śaiva, Śākta, Vaiṣṇava
86 Bauddha - Jaina
87 Other Oriental
88 Western
89 Other

90 RELIGION
91 Comparative
92 Sanātana dharma
93 Outcomes thereof
94 Bauddha - Jaina
95 Mohammadan
96 Zoroastrian
97 Confucian, etc.
98 Christian
99 Other

2) KĀYANIRṆAYA

(For Features-

[Ten Possible Forms

.00 TEXTS
.001 Theory-Philosophy

.01 COMMENTARIES

.02 TRANSLATIONS

.03 REFERENCE TOOLS
.031 Dictionaries
.032 Encyclopædia
.033 Concordance
.034 Index
.035 Bibliography
.036 Statistics

.04 LITERATURES
.041 Theory (Author's)
.042 Theory (Others')
.044 Speech
.045 Writing
.046 Symposium
.047 Memorial
.048 Miscellany

.05 PERIODICALS
.051 Monthly
.052 Two-monthly
.053 Quarterly
.056 Half-yearly
.057 Miscellany
.058 Irregular serial

.06 ASSOCIATIONS
.061 Profession
.062 Conference, Congress
.063 Commission, Com'ee
.068 Parties

.07 STUDIES
.071 Scope, Scheme, Syllabus, Synopsis
.072 Outline, Abridgement, Essence
.073 Museum, Exhibition, Lab'y, Album
.074 Map, Atlas, Graph, Chart, Diagram

TABLE

-differentiation)

of a Subject]

.076 School, Institution, Study-circle
.077 Study, Criticism
.0773 Adverse criticism, Hostile cr., Offence
.07732 Reply to criticism Defence
.078 Adaptation

.08 POLYGRAPHIES

.081 Collection of works of single author
.082 —of many authors
.082 Anthology, Commemoration vols.
.083 Comprehensive selection
.084 Interview
.085 Statement, Com'que
.086 Digest
.0861 In Verse - form
.0862 In Drama - form
.0863 In Fiction - form
.0864 In Letter - form
.0865 Parody
.087 Announcement
.088 Miscellany

.09 HISTORIES

.091 Acts, Bills, Codes,
.0912 Constitution, Governance Governor
.0916 Representation
.092 Biography (individual) including Auto-biography
.093 Collective biog.
.094 Correspondence, Memoirs, Minutes
.095 Expedition, Exploration, Inscrip.
.0961 Official rep., Blue-bk
.0962 Other bodies' pub's
.0963 Inspection report
.097 Survey, Topography
.098 Travel, Guide-book
.099 History, Evolution, Genealogy, etc.
.0991 Prosperous course
.0992 Dwindling course

3) REGIONAL TABLE

:1 WORLD

:2 ASIA except India
:2.1 Turkey
:2.2 Persia etc.
:2.3 Siberia, Turkistan, Central Asia
:2.4 Afghanistan, Balu.
:2.5 Thailand (Siam)
;2.54 Malaya
:2.6 Chinese republic
:2.7 Japan - Korea
:2.8 Burma - Ceylon

:3 INDIA
:3.1 Bengal - Assam
:3.2 Gujarāt-Bombay-Māharāshtra
:3.3 Andhra - Tamilnad
:3.4 U.P. (Brahmarāt)
:3.5 Panjab
:3.7 Bihar - Orissa
:3.81 Sind - Berar
:3.82 C. P. (Mahakosal)
:3.83 Berar
:3.84 Karnātaka
:3.85 Kerala
:3.87 N.W.F. Province
:3.88 Fr. Possessions
:3.89 Portuguese ,,

:3.9 INDIAN STATES
:3.91 Hyderabad (Nizam)
:3.92 Mysore
:3.93 Baroda
:3.94 Kashmir
:3.95 Rajputana
:3.96 Central India
:3.97 Himalayan
:3.98 Other

:4 AFRICA

:5 EUROPE
:5.1 United Kingdom
:5.11 England
:5.12 Wales
:5 .13 Scotland
:5 .13 Ireland
:5.2 Germany
:5 .3 France
:5 .4 Italy
:5.5 Spain - Purtugal
:5 .6 Scandinavia
:5 .7 U.S.S.R. (Russia)
:5 .86 Poland
:5 .862 Lithuania
:5 .863 Latvia
:5 .864 Estonia
:5 .865 Finland
:5.81 Switzerland
:5 .82 Czechoslovakia
:5 .84 Yugoslavia
:5 .85 Greece
:5 .87 Austria
:5 .88 Hungry

:6 AMERICA
:6.11 Canada
:6 .12 U. S. A.
:6.15 South America
:7 AUSTRALIA, N.Z., etc.
:8 SEAS
:81 Indian Ocean
:82 Pacific Ocean

4) PHILOLOGICAL TABLE

:i INDO - EUROPEAN (Indo-Germanic)
:i1 Indic branch (Indo-Aryan)
:i11 Vedic language and Sanskrit
:i12 Pali, Prakrit, etc.
:i13 Modern Indian languages
:i131 Marathi
:i132 Gujarati
:i133 Sindhi
:i134 Panjabi
:i135 Hindi
:i136 Maithili
:i137 Bengali
:i1371 Asamiya
:i1372 Oḍia
:i138 Simhalese
:i14 Mixed
:i141 Urdu (and all paiśachi languages)
:i148 Indo-Iranic
:i15 Iranic branch
:i16 Zend (Avestan), Old Iranic, Bactrian, etc.
:i17 Old Persian
:i18 (Mediaeval) Pahlavi
:i19 Modern Persian
:i2 Armenian
:i3 Greek languages
:i31 Ionic
:i32 Doric
:i4 Albanian
:i5 Latin languages
:i51 Latin

:i52 Italian
:i53 French
:i54 Spanish
:i6 Keltic languages
:i61 Irish
:i62 Scotch
:i63 Welsh
:i7 Teutonic languages
:i71 Gothic
:i72 Scandinavian
:i73 English
:i74 German
:i8 Baltico-Slavokian
:i81 Balto
:i82 Lithuanian
:i85 Slavonian
:i86 Russian
:i9 Other

:ii SEMETIC
:iil Sumerian
:ii2 Assyrian
:ii3 Babylonian
:ii4 Hebrew
:ii5 Arabic
:ii6 Syraic

:iii HAMITIC, URAL-ALTAIC
:iiil Old Egyptian
:iii2 Coptic
:iii3 Libian
:iii4 Ethiopic
:iii9 Ural-Altaic

:iv DRAVIDIC
:ivl Telgu
:iv2 Tāmil
:iv3 Kannāda
:iv4 Mālayalam

:vi MUṄḌĀ, etc.
:vii TIBETO-BURMAN

:viii CHINEAN
:viiil Chinese
:viii2 Korean
:viii3 Japanese

:ix OTHER
:xil Malaya-Polynesian
:ix2 American Languages
:ix3 African Languages
:ix34 Central African „
:ix39 South African „
:ix4 Pacific Languages
:ix41 Maori
:ix5 Caucasian,etc.

5) ANTHROPOLOGICAL TABLE

:0.1 Man in general
:0.2 Hindu
:0.21 Brāhmana
:0.22 Kṣhatriya
:0.23 Vaiśya
:0.24 Śūdra
:0.25 Panchama
:0.3 Outcomes thereof
:0.4 Bauddha-Jaina
:0.5 Muslim
:0.6 Parsi
:0.7 Confucian, etc.
:0.8 Christian
:0.9 Other
:0.91 Urasian
:0.92 Negro
:0.93 Jew
:0.94 Armenian, etc.

6) CHRONOLOGICAL TABLE

अ Before Christ
आ 1st Century B.C.
थि 2nd Century B.C.
क 1st Century A.C.
का 1st decade of 1st Cen.
कि 2nd decaed „ „
कौ 10th decade „ „
ख 2nd Century A.C.
ग—ब 3rd Century to 19th
न 20th Century
ना 1st decade of 20th Cen.
नि 2nd decade „ „ „
नृ 5th decade (1940-49)
नृ1 for 1941 A.C.
नृ2 for 1942 A.C.
नृ3 for 1943; *and so on.*

7) The DIṄNIRṆAYADEVICE is made by simply putting two colons before the particular notation (to denote the 'point of view' taken) added.

[As for examples, '34·07 :: 84' is to represent 'Study of Sociology from the Vedantic point of view'; for, 34 is Sociology (*Outline of classes,*) ·07 Studies (*Kāyanirnaya*), 84 Vedanta; and ':: 84' is from the Vedantic point of view': '14·01 :: 13' is 'Commentary on Law from the ethical point of view'; for 14 is Law, ·01 Comentary, 13 Ethics.]

· The subject-notation (outline of classes) of two main digits (with or withont decimal fractional additions as shown in the scheme) suffixed whereever necessary with one or more further notations of the various auxiliary tables, such as Kāyanirnaya, Regionol, Philological, Anthropological and Chronological tables, putting a colon (:) between the different kinds of notations, will form the full notation for the subject of a book or literature. In the case of Diṅnirṇaya two colons are used, as shown in the previous paragraph..

A few more examples may be helpful in understanding the process: The notation or symbol for Fine arts is 70; and

2.5 stands for Thailand (Siam); ∴ 70 : 2.5 will be the notation for the subject of Thailandic (or Siamese) fine arts. Education is 37; history of a subject (see Kāyanirṇaya table) is .09; ∴ 37.09 is for History of education; further, Rājputānā is 3.95 (see Regional table); 37.09 : 3.95 will therefore stand for History of education in Rājputānā; (3.957 being Udaipur, we can form the notation for that in Udaipur too); Rāmāyaṇa is 15; Java 2.8; Javanese Rāmāyaṇa is therefore 15 : 2.8; again, the addition of ':72' (Architecture) will form the notation for Rāmāyaṇa in Javanese architecture. Gîtā is 92.4, Commentary is 01 (see Kāyanirṇaya table), Commentary on the Gîtā is 92.401; again, 5.2 is Germany (see Regional table); German commentary on the Gîtā will be denoted by 92.401 : 5.2. Economics is 33 : Panjab is 3.5; ∴ 33 : 3.5 is for Economics with special reference to the Panjab. 'Charitable institution is represented by 36.1; Parsi community (see Anthropological or Communal table) is denoted by 0.6. Therefore, 36.1 : 0.6 will stand for Parsi charity relief; and so on.

After we have got the full notation for a topic through the process described we would still need the device of particularizing the position of a given book on the shelves of a library in a class where there are many such works. This can be done by using the Author-marks introduced by Mr. GUHA, or following the Chronological table in his Oriental classification, or by adopting both.

IV) INDIAN CONTRIBUTION: LOCATION OF BOOKS on Shelves

When books on one particular subject stand together on the shelves of a library they are to be placed in some order—a convenient one being the authorwise order under an alphabetical scheme, Indian, Roman or any other. The author of *Colon classification* has almost done away with an authorwise arrangement under a class, with the recommendation that books (written in the same language) should be kept together arranged, primarily according to the chronology of publication, giving two tables of symbols to denote Anno Domini.[4] The *Oriental* has however provided with a regular scheme of authorwise arrangement in addition to the Chronological table introduced by the author in his *Prāchya-vargīkaraṇa-paddhati*. GUHA's "Author-Marks or -symbols for Classified Books" appeared in print in *Indiana* for December 30, 1938, issued in April 1939. By this system an authorwise arrangement can be effected. The table it gives converts the standard Indian alphabet into numerical figures, allowing the

[4] *Vide* 'Chronological Table for Book Number' at page 1.27 of *Colon classification*, ed. 2; and 'Chronological Divisions' (for Class Number) at p. 2.20 *ibidem*.

initial letter (with vowel-signs, if any) of a word to remain unconverted at the discretion of the user.

GUHA's Table is as follows:

VOWELS		CONSONANTS (with a few compound letters)					
(For अ no sign is necessary)		क	11	ट	31	ब	55
		क्ष	12	ठ	33	भ	57
आ	.1	ख	13	ड	35	म	59
इ	.2	ग	15	ढ	37	य	61
ई	.3	ग्घ	16	ण	.39	र	63
उ	.4	घ	17	त	41	ल	65
ऊ	.5	ङ	19	थ	43	व	67
ऋ	.54	च	21	द	45	श	71
ऌ	.58	छ	23	ध्म	46	श्री	73
ए	.6	ज	25	ध	47	ष	75
ऐ	.7	ज्ञ	26	न	49	ष्ण	77
ओ	.8	झ	27	प	51	स	79
औ	.9	ञ	29	फ	53	ह	81

् [hasanta] (to show avoidance of vowel) .0

[anusvāra] .09

[chandrabindu].094

N.B.—Figures 83-89 are reserved for letter-indents from Tāmil, Marāthī, etc. and 91-99 from Urdu, Sindhi, etc.

The simplicily and scientific character of the above table will be practically realized when compared, on the one hand, with (i) Charles A. CUTTER's 'Two-figure Alphabetic Author-table', (ii) Table of Author-Numbers, as given on pages 40-99 of DICKINSON's *Panjab Library Primer*, 1916, Baroda tables and R.S. PARKHI's Table, printed on pages 136-8 of his "*Granthālayaśāstrāchā Onāmā*", Poona, 1933.

GUHA's Table of Author-marks to individualize books under a class was originally devised for the Kāshi Vidyāpītha (University) Library in Benares and has been found to be satisfactory. The Librarian of that institution in a letter dated July 25, 1935, wrote as follows to Mr. S. S. SAITH, M.A., (then Deputy Librarian of Dayal Singh Library, Lahore, afterwards Supdt. of Reading Rooms in the Imperial Library, Calcutta; and at present Librarian of the Panjab University): "As desired I am herewith sending a copy of the table for Indian names which. Mr. S. C. GUHA has prepared for our use. There is not much difference between this and the table you have sent me. Both require the use of an initial letter with two figures. But our table is perhaps simpler and more logical. Kindly let me know your own opinion about it."

Other tables known to us are more or less on the lines of the methods adopted by CUTTER, SANBORN and others in the west. But the Baroda schemes are rather original in the way that they do not require even the initial letter of a word to be shown and have converted the whole thing to plain

numerical figures. The BORDEN table is for names given in the Roman alphabet and the KUDALKAR one is for those in the standard Indian alphabet, written in Nāgari or other scripts. It may be mentioned that Mr. GUHA's table gives an option to the user either to retain the initial letter of a word or to convert the same also to pure numerals, although his recommendation is to retain at least one initial letter, as it is, and convert only the second letter and also the subsequent ones when considered necessary.[5]

The Library of the Bombay University keeps the author-wise arrangement of books under a class rather than a strict chronological order. But without introducing an author-table it has followed the plan of marking books simply with the first three letters of the author's surname (or the name of a substitute) as they are, in addition to the class-number. This is a very ancient method adopted in the west and retained till to-day by those librarians who would not like to be governed by arbitrary rules of Author-tables. The method is followed in the printed supplementary catalogues of the Library, issued from time to time. Minutely classified libraries of smaller dimension may perhaps begin with only one letter in the first instance and find it quite workable. But most librarians would probably find it worth-while to follow a regular contrivance from the very beginning.

v) SOME OBSERVATIONS

We have seen at some length the main features of the two recent contributions to the science and art of classification. While conducting library-training classes for two years in Bikaner, as Chief Librarian of the State, the present writer had opportunities of discussing both the systems along with the foreign methods. It was found that the students in general took great interest in the two recent Indian schemes, each providing novel and useful contrivances. The original outlook the *Colon* has introduced into our way of classification was found to be greatly appreciated, although the students were

[5] Mr. GUHA has recommended the use preferably of the surname, as in the west, while treating an author. I should however think that in India we would rather give prominence to the forename or personal name in regard alike to classical and modern authors. But it is a matter which can be left to the choice of individual librarians, provided the particular method followed is made clear. As Chief Librarian I adopted Mr. GUHA's scheme in the Bikaner State but found it feasible to use the forename (rather than the surname recommended) in treating classical authors as also modern names, except where an author adopted a shortened style consisting mainly of the surname with initials of the forename, as generally done in Europe.

rather confused with the elaborate mixed series of notations, requiring the use of all the letters of the Roman alphabet, both capital and small, the ten numerals and a few other symbols. It seemed a knowledge of higher mathematics with its intricate symbolism was a prerequisite of a proper application of the Colon scheme. The *Oriental* on the other hand was easily understandable and workable with average knowledge and training, and was found to be more suitable than DEWEY and others for our purposes : and the State of Bikaner took a dozen copies of *Prāchya-vargīkaraṇa-paddhati* for the purpose of training and use. I have written elsewhere (*Aryan Path,* May 1941) how it helped my work as conductor of the training course there, where a considerable number of students had hardly any University education, but could easily follow the illustrations as the work gave Indian equivalents of foreign terms and the students seemed to be rather logical than conventional.

That the *Colon* scheme is "an original kind in classification method" has been acknowledged by such British expert as W. C. B. SAYERS (vide his *Introduction to Library Classification,* 1935) : an American authority of the type of Henry E. BLISS in his *Organization of Knowledge in Libraries,* 1939, has pronounced it to be a system "well worth study by those who contemplate constructive developments in bibliographic classification." Its comprehensive character is recognized by the scientific journal *Nature.* The *Oriental* scheme has not gone much out of the boundaries of India, but in the country for which it is primarily intended the work has been well received, although not extensively tried as yet. One essential thing in it is the art of condensation rather than expansion, and Prof. P. K. GODE, an orientalist of repute, in reviewing the work in the *Oriental Literary Digest* for July 1938, has very aptly written : "The tropical climate has developed in us a habit of expanding and unless the art of condensing is mastered by us in fields, literary and bibliographical, with the help of an indigenous system of classifying our condensers—*viz.*, the books—we cannot hope to be up-to-date in the use of these books on which all advancement of learning depends. We congratulate Prof. GUHA for having evolved such a scheme together with all the accessories for successful working, such as Registers, Number-labels, etc., at moderate price."

What I should like is that these Indian schemes should be properly studied before following foreign ones, which are meant primarily for Libraries containing books in English and other foreign languages.

APICULTURE IN INDIA[1]

By T. W. MILLEN, M.SC., D.V.M.

I AM very grateful to the Zoological Society of the Benares Hindu University for inviting me to deliver this lecture on apiculture. If I am able to help to inspire one of you to devote some of your time to the study of this insect friend of man, my time will have been well spent. The teachers and students of Zoology have training and ability to contribute much to the knowledge of the particular conditions under which bees should be kept in India for economical honey-production.

Dr. MISRA has kindly given me ten points, discussions of which he thought would be of interest to you. I intend to include them in this discourse.

THE VALUE AND SOURCES OF HONEY IMPORTED INTO INDIA

In the hills, this summer, I noticed many jars of Australian honey for sale in the provisions shops. The usual price was Rs. 1/12/- per one pound jar. The same honey is available in Allahabad shops for Rs. 1/8/-, and a limited amount of American honey is also sold at Rs. 2/- per pound jar. The Rural Development Apiary at Jeolikote has been selling honey for several years at prices ranging from Rs. 1/6/- to Rs. 1/12/- per pound jar, according to the grade. I purchased some very fine hill honey in a shop in Naini Tal at Rs. 1/2/- per pound jar in July. This honey had crystalized with a smooth texture and still contained the aroma of wild roses. At the Swadeshi Exhibition in Allahabad, a company from Kashmir sold a large quantity of honey to visitors who came in great numbers to this annual event. There is no doubt that there is a market in India for fine grade honey at an attractive price. Many of you may be thinking that these are very high prices to pay for honey considering that one can secure it at three or four annas a seer in large quantities. This cheap honey is the poorly harvested and improperly marketed honey of the rock bee, *A. dorsata*, and should not be confused with the honey secured from *A. indica* colonies, whether wild or in modern hives.

[1] Lecture delivered by Dr. T. W. MILLEN under the auspices of the Zoological Society, B.H.U., on the 19th December, 1941.

Causes and Results of the Neglect of Progressive Apiculture in India

The whole livestock industry in India has suffered tremendously owing to the prevailing custom of permitting all kinds of livestock to breed promiscuously; adequate checks against parasites and predators have not been made; and the resulting survival of the "fittest" has been too often the survival of the least useful. Cows of high fecundity and heavy milk yield succumbed first during famine or on deficient rations. *Desi* chickens and swine are little better than the wild species in many respects. Even goats, which have been selected probably more than any other group of farm animals in India from a milk-production standpoint, are far inferior to European breeds. The best annual yield yet recorded for an Indian goat is about half the average yield of 25 lakhs of goats in Germany last year. Much of the progress gained by selecting the female side of a herd or flock is lost in one generation by using inferior sires. Man has been able to control the mating of bees for only a very few years, and as yet this skill is in the hands of a few research workers. In India for centuries even the female line of the honey bee has not been selected, but all colonies have been robbed systematically and have been left to their own devices without brood combs or food stores at the end of the honey flow. Bees that stayed on their combs when they were being ruthlessly cut from their attachments were crushed—those which ran for corners and cracks, deserting broken combs, survived. Hence many swarms of Indian bees will cluster far from the salvaged combs in a newly-hived colony. The brood is allowed to starve and the colony absconds as soon as the combs begin to give off a putrid odour. The Italian bee, on the other hand, quickly repairs all cut or broken combs and salvages most of the eggs, larvae and pupae. When wax moths enter a colony of Indian bees, at night they lay eggs on the wax cappings which have fallen as the brood emerged. Within a few days the moth larvae are tunneling through the combs and the bees abscond to start a new comb in another location. The Italian bees on the other hand carry the cell cappings outside and keep a good entrance guard. If the Italian colony becomes weak so that it is unable to cover all its comb and wax moths get started in them, the bees keep on working in the damaged combs as long as possible. The predatory wasps often force a colony of Indian bees to go to a new location or perish. Several varieties of ants cause colonies on the plains to desert once they begin to invade the bee colony in large numbers. The Indian bees have some other reasons or excuses

for absconding that I have not found out as yet—and it is this trait of absconding that gives more trouble than any other to the Indian apiarist.

Little has been done in India to provide nectar for bees and most honey-flows are incidental. In America areas producing honey produce it from certain field or orchard crops which are not native to the area. Buckwheat is an important nectar source in eastern U.S.A.; the clovers in the central States, oranges and other citrous fruits in California, the tupelo gum in the South, and the mesquite in the South-west are examples of such specialized crops. Algeroba (a form of mesquite) provides 90% of the nectar for the Hawaiian bees, both the forage and the bees were imported from abroad. Australian and Japanese apiaries are stocked with bees descended from recent importations from Europe and America.

There is a great interest in bee keeping in India to-day and great progress has been made within a very few years in this field. Importations of European races of bees have been made but I believe I am correct in saying that there are no foreign bees on India's soil to-day.

Species of Indian Bees and their Productivity

There are three species of bees in India which build combs of wax consisting of hexagonal cells extending horizontally on either side of the mid-rib. These are the giant rock bee, *Apis dorsata;* the "little" bee or *Apis florea;* and the Indian bee, *Apis indica*. *A. dorsata* and *A. florea* build single combs in the open under some limb or protecting archway or similar sheltered location. The rock bee yields large quantities of honey which, owing to the usual careless methods of harvesting, contains juice from mashed bees and larvae, pollen, etc. This honey usually ferments, becoming inferior in texture and taste in comparison with the more carefully processed imported and hill honeys. *A. dorsata* has the reputation of being very vicious and has never been hived successfully, but research going on at present indicates that these bees can be handled when proper care is taken and that methods can be devised for securing more and better honey from them than that now sold in the markets. *A. florea* yields small quantities of honey and deserts its comb upon being disturbed. The Indian bee, *A. indica,* is the only indigenous species which can be kept in a hive for the purpose of commercial honey production. *A. florea* is essentially a plains species and *A. dorsata* migrates to the hills during certain seasons of the year. *A. indica,* however, is found in both the hills and in the plains of India.

RELATIVE MERITS OF HILL AND PLAINS VARIETIES OF A. INDICA

The size of bees has been determined by several methods. The thorax diameter, length of right forewing, tongue length, cell width and weight have all been used for this purpose. Comb foundation size is often indicated by the number of cells per linear inch or per square decimeter (counting the cells on both sides). These values for the combs of the indigenous bees of the United Provinces and for those of the European bee, *A. mellifica*, are as follows:

Kind of bee	Cells per inch	Approximate number of cells per square decimeter
A. dorsata	4.5	755
A. mellifica	4.8	835
A. indica (Mussoorie)	5.5	1046
A. indica (plains)	6.0	1290
A. florea	8.5 to 9	2515

You may think that this size variation should not have much influence on the producing ability of the bee but, as I ~~see it,~~ this is the greatest single factor for yield capacity. Remember that the queen lays all the eggs for the colony and that her capacity is limited. Therefore, a colony can be built up to a number which represents the capacity of the queen to lay eggs less the daily mortality of the colony. Large bees carry much more nectar than do small bees, and their comb capacity is much greater. Three Langstroth frames comprise the greatest area I have seen covered by one *A. indica* (plains variety), colony. This colony had been maintained in a modern hive in Allahabad for two years. The largest area of natural comb that I have seen was of equivalent area. The hill varieties are larger and much darker than the plains varieties. They also make larger combs and gather much more nectar. The highest yield record reported for India of which I have knowledge is 50¼ pounds for a Punjab government colony at Nagrota. One Punjab zamindar reported a 30 pound yield for one of his colonies. I believe few plains colonies have yielded more than 15 pounds and half this amount would, for them, be considered an average yield. Hill bees behave more like European bees than the plains varieties and can even be kept successfully on the plains. Some Indian apiarists are of the opinion that the hill varieties have originated from crosses between *A. mellifica* and *A. indica*. The largest cell sizes reported for the higher hill stations in the Punjab are about 5¼ cells per inch. In the

United Provinces comb foundation is now being sold in two cell sizes, 5¼ and 6 cells per inch. Hill bees at times use foundation of 5 cells per inch but usually distort it somewhat and raise a large number of drones. Using 5¼ cell foundation should increase the average size of the hill bees so that they would become more profitable. There is undoubtedly a good deal of intercrossing of the hill and plains varieties as bees of intermediate sizes and colour are found. Also colonies of bees of dark grey colour brought from the hills have changed to smaller bees of intermediate shades of grey and yellow after one or two new generations of queens have headed the colony. As more and more bees are kept under constant observation and selection is used in an apiary, superior strains of bees are bound to appear. I believe from what information I have been able to secure that the bees of Travancore are much more amenable to apiary conditions than the wild bees found on the plains of the United Provinces. I have been unable as yet to clip the wings of queen bees caught at Allahabad without having her replaced soon by a virgin. I have also been unable to get one of these virgins to mate and take up her duties in the hive. She invariably takes the swarm with her a few days after her emergence. My present policy is to put a queen-excluding entrance guard on all colonies as soon as they are hived. Some have attempted absconding seven or eight times, each time returning to the imprisoned queen, which has often been the only bee left in the hive for a period of several months.

Queens from Jeolikote and Mussoorie may at times be clipped successfully and these bees do not usually attempt absconding as readily as others; however, I keep entrance guards on all hives as a matter of routine except in the case of hill colonies containing virgin queens. These hill virgins often return after mating to begin their duties in the old hive. A colony of plains bees with an imprisoned queen will usually join a swarming colony with a free queen or virgin queen and the apiarist's loss is thus double.

Prospects of Bee Keeping as a Cottage Industry in India

We hope that apiculture will become a cottage industry at Allahabad and that success similar to that reported from Travancore and Madras will not be too long in coming in the United Provinces.

The hive in use at Allahabad contains the "Newton" size of frames identical with those supplied by the Jeolikote

apiary for its small hive. The hive is, however, of the American style. It allows for easy cleaning to prevent comb destruction by wax moths. Parts of hives are readily interchangable and the size of the hive can be rapidly increased or reduced by adding or removing "supers" according to the needs of the colony. A bee space of about one-fourth of an inch is used in constructing the hive. The eight frames will probably be all that the ordinary plains queen can care for and I propose that the villagers remove the honey from the outside frames only and that they market both honey and wax, since the combs they would try to store between honey flows would in all probability be destroyed by wax moths. In cases where the honey flow is heavy or if exceptional colonies are found, 'supers' may be used.

These hives have a simple and efficient ventilation system which is easily regulated according to the season. Stimulative feeding can be done from a shallow tin lid in which small holes are made. This is placed under the hive cover over a hole in the corner. These hives can be manipulated without damage to a single bee.

The hive should be kept in a sheltered spot where it is protected from the hot summer rays of the sun. The bottom board should be protected from ants by the use of water containers. In Hawaii, the hives are kept on iron rods which are kept covered with axle grease. In so far as I know, this method has not been tried in India.

Bees need plenty of water to drink, especially in the hot, dry weather and at times it is necessary to feed them to save them from starving. Feeding with sugar syrup more dilute than 50% is not advisable. The bees need the sugar for food and are usually in dire need of it before the Indian apiarist gives it. Furthermore, to dilute it with great quantities of water defeats much of the purpose for which it is given. Dilute solutions must be evaporated to keep them from fermenting. Often secreted nectar is as high as 60% sucrose. You will read statements like these: "After the bees had been fed for a few days they settled down to business and started working"; or, "Feed bees only at night or they will become lazy and not work in the daytime". I believe both of these statements are misleading. The bee can use cane sugar for food as well as for making comb. You can make 20 pounds of 50% syrup for what you can sell one pound of good honey for. If you build up your colony for several brood generations by stimulative feeding you will have a large force of bees to gather in

the nectar when the flowers begin to yield. If you do not feed the colony during the time when there is a dearth of nectar, then at the end of the honey flow you have a colony of bees built up on a flow, but no honey crop to gather.

A little syrup daily often starts broodrearing during a time of dearth of nectar, when all egg-laying has stopped. If this feeding is given up after about three days, no matter how much syrup may have been stored, the bees fail to raise brood and let the eggs dry up.

Colonies may be built up by daily feeding them for the February honey flow. Some had been dormant since October when they were brought from the hills in a broodless condition. They now go out daily in search of food and are bringing in sufficient pollen to keep the brood supplied.

It is also cheaper to feed for comb building than to buy full sheets of comb foundation. Vertical wiring with the wires spaced about two inches apart is very satisfactory for either salvaging natural combs or for building reinforced straight combs from thin strips of starter. It is safer to intersperse frames of freshly cut natural combs in an established colony and to give the newly hived wild swarm frames of unbroken combs from the established colony.

Care and Attention Necessary in Marketing the Produce

Personally, I prefer my honey in the new white comb with the flower flavours still present; but many people have a preference for extracted honey. I believe that in India only those in commercial honey production should use the centrifugal extractors and that the solar extractor offers much for the villager. A simple inexpensive type of extractor made from an oil tin and glass costs Rs. 1/4/-.

Sealed honey only should be removed from the hive. It can be suspended in a cloth or wire bag in the extractor and the outfit placed in the hot rays of the sun. The wax collects on top of the honey and may be removed in one piece upon cooling. The honey receives a certain amount of pasteurization during the process and is free from the juice of mashed bees and larvae and other contamination. It should be put up immediately in airtight containers so that it will retain its odour and flavour. During the monsoon open honey absorbs moisture and begins to ferment on the surface. Soon the whole of it is spoiled. Honey in tight glass or tin containers keeps for years.

VALUE OF A HONEY DIET

Honey is one of man's most concentrated foods and is more easily assimilated by the body than any food consumed by him. It consists of about 75% invert sugar, usually, almost half of which is dextrose, the form of carbohydrate found in the circulating blood. Athletes have found it the quickest source of extra energy, since it passes into the blood unchanged. Many bottle-fed infants receive honey as their sugar supplement. Honey finds much use in feeding, invalids and in medicine. In America, especially, where the beekeepers are organized behind a scheme for the promotion of the use of more honey in the diet a great many recipes for its use have been developed and distributed.

Sweets are being made in which honey is the only or main sweetening agent. When honey is used in cake, the texture remains soft and the cake does not dry out, since honey retains its hygroscopic property even when cooked with other material. Cold drinks can be made from honey. It can be used to sweeten raw or cooked fruits and cereals or it can be eaten with butter on bread, toast or chapatis. One of my favourite ways of eating it is with a fresh, hot chapati accompanied by a glass of cold milk or a cup of hot tea. As more good honey becomes available in India, I am sure that the Indian people will no longer consider it mainly as a medicine but as one of their finest foods.

SOME INFINITE INTEGRALS INVOLVING CONFLUENT HYPERGEOMETRIC FUNCTIONS

By Miss S. SINHA, M.A., D.T.

THE object of this note is to evaluate a general integral and state several particular cases of interest.

The integral is

$$I = \int_0^\infty x^{l-1} e^{-\frac{1}{2}x} {}_2F_2(\alpha, \beta; \gamma, \delta; -xt)\, W_{k,m}(x)\, dx,$$

where ${}_2F_2(\alpha, \beta; \gamma, \delta; -xt)$ denotes the generalised hypergeometric series and $W_{k,m}(x)$ denotes the generalised Whittaker function.

$$I = \int_0^\infty x^{l-1} e^{-\frac{1}{2}x} W_{k,m}(x) \sum_0^\infty \frac{(\alpha, s)(\beta, s)}{s!(\gamma, s)(\delta, s)} (-xt)^s\, dx,$$

where (α, s) denotes $(\alpha)(\alpha+1)\ldots\ldots\ldots\ldots(\alpha+s-1)$.

$$\therefore I = \sum_0^\infty \frac{(\alpha, s)(\beta, s)}{s!(\gamma, s)(\delta, s)} (-t)^s \int_0^\infty x^{l+s-1} e^{-\frac{1}{2}x} W_{k,m}(x)\, dx.$$

Here term by term integration is justifiable since

$${}_2F_2(\alpha, \beta : \gamma, \delta; -xt)$$

is uniformly convergent in any fixed interval $a < x < b$ where b is arbitrary;

$$x^{l-1} e^{-\frac{1}{2}x} W_{k,m}(x)$$

is continuous for all finite values of x and

$$\sum_0^\infty \frac{(\alpha, s)(\beta, s)}{(\gamma, s)(\delta, s)\, s!} (-t)^s \int_0^\infty x^{l+s-1} e^{-\frac{1}{2}x} W_{k,m}(x)\, dx$$

is absolutely convergent when

$$R(l \pm m + \tfrac{1}{2}) > 0.$$

Thus

$$I=\sum_{0}^{\infty}\frac{(\alpha,s)\,(\beta,s)\,(-t)^{s}}{s\,!\,(\gamma,s)\,(\delta,s)}\cdot\frac{\Gamma(l+s+m+\frac{1}{2})\,\Gamma(l+s-m+\frac{1}{2})}{\Gamma(l+s-k+1)},\dagger$$

where $R\,(l\pm m+\frac{1}{2})>0$;

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\sum_{0}^{\infty}\frac{(\alpha,s)\,(\beta,s)}{s\,!\,(\gamma,s)\,(\delta,s)}\cdot\frac{(l+m+\frac{1}{2},s)}{(l-k+1,s)}\times(l+\tfrac{1}{2}-m,s)\,(-t)^{s}$$

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\,{}_4F_3\left\{\begin{matrix}\alpha,\beta,l+m+\frac{1}{2},l-m+\frac{1}{2};\\ \gamma,\delta,l-k+1;\end{matrix}-t\right\},\text{(A)}$$

provided that $R\,(l\pm m+\frac{1}{2})>0$

This formula admits of several interesting particular cases which are now stated.

I. $\alpha=l-k+1$ (A) becomes

$$\int_{0}^{\infty}x^{l-1}e^{-\frac{1}{2}x}\,{}_2F_2\,(l-k+1,\beta\,;\gamma,\delta\,;\,-x\,t)\,W_{k,m}(x)\,dx$$

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\,{}_3F_2\left\{\beta,l+m+\tfrac{1}{2},l-m+\tfrac{1}{2};\gamma,\delta;-t\right\},$$

if $R\,(l\pm m+\frac{1}{2})>0$ and $|t|<1$.

(i) If $\gamma=l+m+\frac{1}{2}$,

$$\int_{0}^{\infty}x^{l-1}e^{-\frac{1}{2}x}\,{}_2F_2\,(l-k+1,\beta\,;l+m+\tfrac{1}{2},\delta\,;-xt)\,W_{k,m}(x)\,dx$$

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\,{}_2F_1\left\{\beta,l-m+\tfrac{1}{2}\,;\delta;-xt\right\}$$

provided that $R\,(l\pm m+\frac{1}{2})>0$ and $|t|<1$.

(ii) If $\delta=l-m+\frac{1}{2}$, the integral takes the form

$$\int_{0}^{\infty}x^{l-1}e^{-\frac{1}{2}x}\,{}_2F_2\,(l-k+1,\beta\,;\gamma,l-m+\tfrac{1}{2};-xt)\,W_{k.m}(x)\,dx$$

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\,{}_2F_1\left\{\beta,l+m+\tfrac{1}{2}\,;\gamma\,;-t\right\}$$

provided that $R\,(l\pm m+\frac{1}{2})>0$ and $|t|<1$.

† S. Goldstein : Operational Representation of Whittaker's Confluent Hypergeometric Function and Weber's Parabolic Cylinder Function : *Proc. Lond. Math. Soc.* 34 (1932) 103-125 (118).

(iii) $\gamma = l+m+\frac{1}{2}$ and $\delta = l-m+\frac{1}{2}$,

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x} {}_2F_2(l-k+1, \beta; l+m+\tfrac{1}{2}, l-m+\tfrac{1}{2}; -xt)\, W_{k,m}(x)\, dx$$

$$= \frac{\Gamma(l+m+\frac{1}{2})\ \Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)} {}_1F_0(\beta\ ;\ -t)$$

$$= \frac{\Gamma(l+m+\frac{1}{2})\ \Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)} (1+t)^{-\beta}$$

Particular cases :—

(*a*) Since

$$L_p^q(x) = \frac{(-1)^p}{p\,!}(x)^{-\frac{1}{2}(q+1)}\ e^{+\frac{1}{2}x} W_{p+\frac{q}{2}+\frac{1}{2},\ \frac{1}{2}q}(x) \ldots (\alpha)$$

for +ve integral values of p, where $W_{k,p}(x)$ denotes the generalised Whittaker function and $L_p^q(x)$ denotes a Laguerre polynomial of order p,

we get, on by putting $k = p+\frac{q}{2}+\frac{1}{2}$ and $m = \frac{q}{2}$,

$$\int_0^\infty x^{l+\frac{1}{2}q-\frac{1}{2}} e^{-x} {}_2F_2\left\{l-p-\frac{q}{2}+\frac{1}{2}, \beta; l+\frac{q}{2}+\frac{1}{2}, l-\frac{q}{2}+\frac{1}{2}; -xt\right\}$$

$$\times\ L_p^q(x)\, dx = \frac{(-1)^p}{p\,!} \frac{\Gamma\left(l+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(l-\frac{q}{2}+\frac{1}{2}\right)}{\Gamma\left(l-p-\frac{q}{2}+\frac{1}{2}\right)}(1+t)^{-\beta}$$

where $\quad R\left(l \pm \frac{q}{2}+\frac{1}{2}\right) > 0$ and $|t| < 1$.

(*b*) Since

$$T_q^p(x) = \frac{x^{-\frac{1}{2}(q+1)}\ e^{\frac{1}{2}x}}{p\,!\,\Gamma(p+q+1)} W_{p+\frac{1}{2}q+\frac{1}{2},\ \frac{1}{2}q}(x) \ldots\ldots-(\beta)$$

where $T_q^p(x)$ is a Sonine polynomial of order p, it follows that

$$\int_0^\infty x^{l+\frac{1}{2}q-\frac{1}{2}} e^{-x} T_q^p(x)\, {}_2F_2\left\{\begin{matrix} l-p-\frac{q}{2}+\frac{1}{2}, \beta\, ; \\ l+\frac{q}{2}+\frac{1}{2}, l-\frac{q}{2}+\frac{1}{2}; \end{matrix} -xt\right\} dx$$

$$= \frac{\Gamma\left(l+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(l-\frac{q}{2}+\frac{1}{2}\right)}{p!\,\Gamma(p+q+1)\,\Gamma\left(l-p-\frac{q}{2}+\frac{1}{2}\right)}(1+t)^{-\beta},$$

if $R\left(l \pm \frac{q}{2}+\frac{1}{2}\right) > o$ and $|t| < 1$.

(*c*) $m = \pm\frac{1}{4}$. We have

$$W_{k,\pm\frac{1}{4}}(x) = 2^{-k+\frac{1}{4}} x^{\frac{1}{4}} D_{2k-\frac{1}{2}}(\sqrt{2x}) \ldots\ldots\ldots\ldots\ldots (\delta)$$

where $D_a(x)$ denotes Weber's Parabolic Cylinder Function.

∴ The formula becomes

$$\int_0^\infty x^{l-\frac{3}{4}} e^{-\frac{1}{2}x} D_{2k-\frac{1}{2}}(\sqrt{2x})\, {}_2F_2\left\{l-k+1, \beta; l+\tfrac{3}{4}, l+\tfrac{1}{4}; -xt\right\} dx$$

$$= \sqrt{\pi}\; 2^{k-2l+\frac{1}{4}} \frac{\Gamma(2l+\frac{1}{2})}{\Gamma(l-k+\frac{1}{2})}(1+t)^{-\beta},$$

if $l > -\frac{1}{4}$ and $|t| < 1$.

(*d*) $k = o$. We know that

$$\sqrt{\pi}\; W_{o,m}(x) = x^{\frac{1}{2}} K_m\left(\frac{x}{2}\right), \ldots\ldots\ldots\ldots\ldots\ldots (\eta)$$

where $K_m(x)$ is Bessel's function of imaginary argument.

In this case the integral formula becomes

$$\int_0^\infty x^{l-\frac{1}{2}} e^{-\frac{1}{2}x} K_m\left(\frac{x}{2}\right) {}_2F_2\left\{l+1, \beta; l+m+\tfrac{1}{2}, l-m+\tfrac{1}{2}; -xt\right\} dx$$

$$= \sqrt{\pi}\, \frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l+1)}(1+t)^{-\beta},$$

if $R(l \pm m+\frac{1}{2}) > o$ and $|t| < 1$.

(*e*) When $m = \frac{1}{2}$ and $k = q$ we have

$$\frac{1}{\Gamma(q+1)} W_{q,\frac{1}{2}}(x) = k_{2q}\left(\frac{x}{2}\right), \ldots\ldots\ldots\ldots (\xi)$$

where $k_n(x)$ denotes Bateman's function.

The integral then becomes

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x} k_{2q}\left(\frac{x}{2}\right) {}_2F_2\left\{l-q+1, \beta; l+1, l; -xt\right\} dx$$

$$=\frac{l\{\Gamma(l)\}^2}{\Gamma(q+1)\,\Gamma(l-q+1)}(1+t)^{-\beta},$$

if $l>0$ and $|t|<1$.

(*f*) If $k = \pm m+\frac{1}{2}$ we have,

$$W_{m+\frac{1}{2}, \pm m}(x) = x^{m+\frac{1}{2}} e^{-\frac{1}{2}x} \qquad \ldots\ldots\ldots\ldots\ldots (\theta)$$

In this case the integral becomes

$$\int_0^\infty x^{l\pm m-\frac{1}{2}} e^{-x} {}_1F_1(\beta; l\pm m+\tfrac{1}{2}; -xt)\, dx$$

$$=\Gamma(l\pm m+\tfrac{1}{2})(1+t)^{-\beta}$$

provided that $R(l\pm m+\frac{1}{2})>0$ and $|t|<1$.

(*g*) $\beta = l\pm m+\frac{1}{2}$.

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x} {}_1F_1(l-k+1, l\mp m+\tfrac{1}{2}; -xt)\, W_{k,m}(x)\, dx$$

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}(1+t)^{l\pm m+\frac{1}{2}}$$

provided that $R(l\pm m+\frac{1}{2})>0$ and $|t|<1$.

II. If $k=\pm m+\frac{1}{2}$

the integral becomes

$$\int_0^\infty x^{l\pm m-\frac{1}{2}} e^{-x} {}_2F_2\left\{\alpha, \beta; \gamma, \delta; -xt\right\} dx$$

$$=\Gamma(l\pm m+\tfrac{1}{2})\, {}_3F_2\{\alpha, \beta, l\mp m+\tfrac{1}{2}; \gamma, \delta; -t\}$$

provided that $R(l\pm m+\frac{1}{2})>0$ and $|t|<1$.

(*a*) If $\gamma = l\mp m+\frac{1}{2}$

$$\int_0^\infty x^{l\pm m-\frac{1}{2}} e^{-x} {}_2F_2\left(\alpha, \beta; l\mp m+\tfrac{1}{2}, \delta; -xt\right) dx$$

$$=\Gamma(l\pm m+\tfrac{1}{2})\, {}_2F_1(\alpha, \beta; \delta; -t)$$

provided that $R(l\pm m+\frac{1}{2})>0$ and $|t|<1$

III. (A) If $\alpha=\gamma$ we get

$$\int_0^\infty x^{l-1}e^{-\frac{1}{2}x}\,{}_1F_1(\alpha;\beta;-xt)\,W_{k,m}(x)\,dx$$

$$=\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\,{}_3F_2\left\{\begin{matrix}\alpha, l+m+\frac{1}{2}, l-m+\frac{1}{2};\\ \beta,\ l-k+1;\end{matrix}-t\right\}$$

provided that $R\,(l\pm m+\frac{1}{2})>o$ and $|t|<1$.

This formula has been given by Varma.†

It is interesting to note that this formula is capable of yielding several useful particular cases.

(*a*) If $k=o$ the integral becomes

$$\int_0^\infty x^{l-\frac{1}{2}}\,e^{-\frac{1}{2}x}\,K_m\left(\frac{x}{2}\right)\,{}_1F_1\,(\alpha;\beta;-xt)\,dx$$

$$=\sqrt{\pi}\,\frac{\Gamma(l+m+\frac{1}{2})}{\Gamma(l+1)}\,{}_3F_2\left[\alpha,\ l+m+\tfrac{1}{2},\ l-m+\tfrac{1}{2},\ \beta,\ l+1;-t\right]$$

provided that $R\,(l\pm m+\frac{1}{2})>o$, $|t|<1$ and m is $a+ve$ integer.

(*b*) By virtue of (α) we get

$$\int_0^\infty x^{l+\frac{1}{2}q-\frac{1}{2}}\,e^{-x}\,L_p^{\,q}(x)\,{}_1F_1\,(\alpha\,;\,\beta\,;\,-xt)\,dx$$

$$=\frac{(-1)p}{p\,!}\cdot\frac{\Gamma\left(l+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(l-\frac{q}{2}+\frac{1}{2}\right)}{\Gamma\left(l-p-\frac{q}{2}+\frac{1}{2}\right)}\,{}_3F_2\left\{\begin{matrix}\alpha, l+\frac{q}{2}+\frac{1}{2}, l-\frac{q}{2}+\frac{1}{2}\,;\\ \beta,\ l-p-\frac{q}{2}+\frac{1}{2}\,;\end{matrix}\ -t\right\}$$

provided that $R\left((l\pm\frac{q}{2}+\frac{1}{2}\right)>o\ |t|<1$,

and p is $+$ *ve* integer.

(*c*) By the help of (β) we get

$$\int_0^\infty x^{l+\frac{q}{2}-\frac{1}{2}}\,e^{-k}\,T_q^{\,p}\,(x)\,{}_1F_1\left(\alpha\,;\,\beta\,;\,-xt\right)dx$$

† R. S. VARMA : Some Infinite Integral involving Weker's parabolic Cylinder Function, *J.T.M.S.* (2) 3 ; 1938; 25-32.

$$= \frac{\Gamma\left(l+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(l-\frac{q}{2}+\frac{1}{2}\right)}{p!\ \Gamma\ (p+q+1)\ \Gamma\left(l-\frac{q}{2}-p\ +\frac{1}{2}\right)} \times$$

$$\times \quad {}_3F_2\left[\alpha,\ l+\frac{q}{2}+\frac{1}{2},\ l-\frac{q}{2}+\frac{1}{2};\ \beta,\ l-p-\frac{q}{2}+\frac{1}{2};\ -t\right]$$

if $R\left(l\pm\frac{q}{2}+\frac{1}{2}\right)>o\ |t|<1$ and p is +ve integer.

(*d*) By putting $m=\pm\frac{1}{4}$ we get the integral

$$\int_0^\infty x^{l-\frac{3}{4}}e^{-\frac{1}{2}x}D_{2k-\frac{1}{2}}(\sqrt{2x})\ {}_1F_1\left(\alpha\ ;\ \beta\ ;\ -xt\right)dx$$

$$= \frac{2^{k-2l+\frac{1}{4}}\ \Gamma\ (2\ l+\frac{1}{2})}{\Gamma\ (l-k+1)}\ {}_3F_2\left[\begin{matrix}\alpha,\ l+\frac{3}{4},\ l+\frac{1}{4}, & \\ \beta,\ l-k+1\ ; & -t\end{matrix}\right]$$

if $l>-\frac{1}{4}$ and $|t|<1$.

(*e*) If $m=\frac{1}{2}$ and $k=q$ the integral becomes

$$\int_0^\infty x^{l-1}e^{-\frac{1}{2}x}k_{2q}\left(\frac{x}{2}\right)\ {}_1F_1\left(\alpha\ ;\ \beta\ ;\ -xt\right)dx$$

$$= \frac{l\,[\,\Gamma\,(l)\,]^2}{\Gamma\ (q+1)\Gamma(l-q+1)}\ {}_3F_2\left\{\alpha,\ l+1,\ l\ ;\ \beta,\ l-q+1\ ;\ -t\right\}$$

if $l>o$ and $|t|<1$.

(*f*) If $k=\pm m+\frac{1}{2}$ the formula takes the form

$$\int_0^\infty x^{l\pm m+\frac{1}{2}}e^{-x}\ {}_1F_1\ (\alpha\ ;\ \beta\ ;-xt)\ dx$$

$$=\Gamma\ (l\pm m+\tfrac{1}{2})\ {}_2F_1\ \left\{\alpha,\ l\pm m+\tfrac{1}{2};\ \beta;-t\right\}$$

provided that $l\pm m+\frac{1}{2}>o$ and $|t|<1$.

This includes I (*f*) as a particular case for $\alpha=l\pm m+\frac{1}{2}$.

B. 1. Since

$$L_n^\alpha\ (x) = \frac{\Gamma\ (1+\alpha+n)}{n\ !\ \Gamma\ (\alpha+1)}\ {}_1F_1\ (-n;\ \alpha+1;\ x)$$

for +ve integral values of n, where $L_n^\alpha\ (x)$ denotes Laguerre polynomial of order n, we get, by putting $\alpha=\eta$, $\beta=p+1$ and t for $-t$,

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x} L_n^p (xt) W_{k,m}(x)\, dx$$

$$= \frac{\Gamma(p+n+1)\,\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{n!\,\Gamma(p+1)\,\Gamma(l-k+1)}$$

$$\times\, {}_3F_2\left[-n, l+n+\tfrac{1}{2}, l-m+\tfrac{1}{2};\, p+1, l-k+1;\, t\right],$$

provided that $R\,(l \pm m + \frac{1}{2}) > o$, $|t| < 1$, and n is $a+ve$ integer.

$$\times\, {}_3F_2\left[-n, p-l-\tfrac{1}{2}q+\tfrac{1}{2}, p-l+\tfrac{1}{4}q+\tfrac{1}{2};\, p+1, p-m-l-\tfrac{1}{3}q+\tfrac{1}{2};\, t\right]\dagger$$

if $p-l\pm\frac{1}{2}q+\frac{1}{2} > o$ and $|t| < 1$

(b) By virtue of (β) we get the integral.

$$\int_0^\infty x^{l+\frac{1}{2}q-\frac{1}{2}} e^{-x} L_n^p (xt)\, T_q^m (x)\, dx$$

$$= \frac{\Gamma(p+n+1)\Gamma(l+\frac{1}{2}q+\frac{1}{2})\Gamma(l-\frac{1}{2}q+\frac{1}{2})\Gamma(p+n-m-l-\frac{1}{2}q+\frac{1}{2})}{m\,!\,n\,!\,\Gamma(q+m+1)\,\Gamma(l+n-m-\frac{1}{2}q+\frac{1}{2})\Gamma(p-m-l-\frac{1}{2}q+1)} \times$$

$$\times\, {}_3F_2\left[-u, p-l-\tfrac{1}{2}q+\tfrac{1}{2}, p-l+\tfrac{1}{2}q+\tfrac{1}{2};\, p+1, p-l-m-\tfrac{1}{2}q+\tfrac{1}{2};\, t\right]$$

if $p \pm \frac{1}{2}q+\frac{1}{2} > o$ and $|t|$ 1.

(c) Putting $m = \pm\frac{1}{4}$ we have

$$\int_0^\infty x^{l-\frac{3}{4}} e^{-\frac{1}{2}x} L_n^p (xt)\, D_{2k-\frac{1}{2}}(\sqrt{2x})\, dx$$

$$= \sqrt{\pi}\, 2^{k-2l+\frac{1}{4}} \frac{\Gamma(p+u+1)\,\Gamma(2l+\frac{1}{2})}{n!\,\Gamma(p+1)\,\Gamma(l-k+1)} \times$$

$$\times\, {}_3F_2\left[-n, l+\tfrac{3}{4}, l+\tfrac{1}{4}, p+1, l-k+1;\, t\right]$$

if $l > -\frac{1}{4}$ and $|t| < 1$

(i) When $m = \frac{1}{2}$ and $t = 1$ we get

$$\int_0^\infty x^{l-1} e^{-x} L_n^p (x) = \frac{\Gamma(l)\,\Gamma(n-l+p+1}{n!\,\Gamma(1-l+p\dagger)}$$

This formula has been given by Howell.

(d) When $k = o$ we get,

$$\int_0^\infty x^{l-\frac{1}{2}} e^{-\frac{1}{2}x} L_n^p (xt)\, K_m\left(\frac{\pi}{2}\right) dx$$

† Varma, ibid. page 27.

$$= \frac{\sqrt{\pi}\,\Gamma(p+n+1)\,\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{n\,!\,\Gamma(p+1)\,\Gamma(l+1)}$$

$$\times\ {}_3F_2\left[-n,\ l+m+\tfrac{1}{2},\ l-m+\tfrac{1}{2}\ ;\ p+1,\ l+1\ ;\ t\ \right],$$

provided that $l \pm m+\frac{1}{2} > 0$ and $|\,t\,| < 1$.

(*e*) Putting $m=\frac{1}{2}$ and $k=q$ we get

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x}\, L_n^p\,(xt)\, k_{2q}\left(\frac{x}{2}\right) dx$$

$$= l\,\frac{\{\Gamma(l)\}^2\,\Gamma(q+1)\,\Gamma(p+n+1)}{n\,!\,\Gamma(p+1)\,\Gamma(l-q+1)}\,{}_3F_2\,(-n,\ l+1, l; p+1,\ l-q+1;\ t)$$

if $l > 0$ and $|\,t\,| < 1$.

2. Using (β) we get,

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x}\, T_p^n\ (xt)\, W_{k,m}\ (x)\, dx$$

$$= \frac{(-1)^n}{n\,!}\cdot\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(p+1)\,\Gamma(l-k+1)}\,{}_3F_2\left[\begin{matrix}-n,\ l+m+\frac{1}{2},\ l-m+\frac{1}{2};\\ p+1,\ l-k+1;\end{matrix}\ t\right]$$

if $l \pm m+\frac{1}{2} > 0$ and $|\,t\,| < 1$.

(*a*) Putting $m=\frac{1}{2}q$ and $k=\gamma+\frac{1}{2}q+\frac{1}{2}$, we get

$$\int_0^\infty x^{l-1}\, e^{-x}\, L_\gamma^q\ (x)\, T_p^n\ \ (xt)\, dx$$

$$= \frac{(-1)^{n+\gamma}}{n\,!\,\gamma\,!}\cdot\frac{\Gamma(l+\frac{1}{2}\,q+\frac{1}{2})\,\Gamma(l-\frac{1}{2}\,q+\frac{1}{2})}{\Gamma(p+1)\,\Gamma(l-\gamma+\frac{1}{2}-\frac{q}{2})}$$

$$\times\ {}_3F_2\left[-n,\ l+\tfrac{1}{2}q+\tfrac{1}{2},\ l-\tfrac{1}{2}\,q+\tfrac{1}{2}\ ;\ p+1,\ l-\gamma-\tfrac{q}{2}+\tfrac{1}{2}\ ;\ t\ \right]$$

if $l \pm \frac{1}{2}\,q+\frac{1}{2} > 0$ and $|\,t\,| < 1$.

(*i*) By (β) we get,

$$\int_0^\infty x^{l+\frac{1}{2}q-\frac{1}{2}} e^{-x}\, T_p^n\ \ (xt)\, T_q^\gamma\,(x)\, dx$$

$$= \frac{(-1)^n\ \Gamma(l+\frac{1}{2}\,q+\frac{1}{2})\,\Gamma(l-\frac{1}{2}\,q+\frac{1}{2})}{n!\,\gamma!\ \Gamma(q+\gamma+1)\,\Gamma(p+1)\,\Gamma(l-\gamma-\frac{q}{2}+\frac{1}{2})}\times$$

$$\times\ {}_3F_2\left[-n,\ l+\tfrac{1}{2}\,q+\tfrac{1}{2},\ l-\tfrac{1}{2}\,q+\tfrac{1}{2}, p+1,\ l-\gamma-\tfrac{q}{2}+\tfrac{1}{2}\ ;\ t\right]$$

if $l \pm \frac{1}{2}\,q+\frac{1}{2} > 0$ and $|\,t\,| < 1$.

† Howell "(On) product of polynomials" *Phil Mag.* 24 (1937) 396—705.

(*b*) If $k=0$ we have

$$\int_0^\infty x^{l-\frac{1}{2}} e^{-\frac{1}{2}x} T_p^n (xt) K_m\left(\frac{x}{2}\right) dx$$

$$=\sqrt{\pi}\frac{(-1)^n}{n!} \frac{\Gamma(l+m+\frac{1}{2})\Gamma(l-m+\frac{1}{2})}{\Gamma(p+1)\Gamma(l+1)}\times$$

$$\times {}_3F_2[-u, l+m+\tfrac{1}{2}, l-m+\tfrac{1}{2}; p+1, l+1; t]$$

provided that $l\pm m+\frac{1}{2}>0$ and $|t|<1$.

(*i*) Put $m=\frac{1}{2}$ and $t=1$.

$$\int_0^\infty x^{l-1} e^{-x} T_p^n (x) dx=(-1)^n \frac{\Gamma(l)\Gamma(p+n-l+1)}{\Gamma(p+n+1)\Gamma(p-l+1)}$$

if $l>0$.

(*c*) Putting $m=\pm\frac{1}{4}$, by the help of (6) we have

$$\int_0^\infty x^{l-\frac{3}{4}} e^{-\frac{1}{2}x} T_p^n (xt) D_{2k-\frac{1}{2}}(\sqrt{2x})\, dx$$

$$\sqrt{\pi}\frac{(-1)^n}{n!}\frac{2^{k-2l+\frac{1}{4}}\Gamma(2l+\frac{1}{2})}{\Gamma(p+1)\Gamma(l-k+1)}\, {}_3F_2\left[\begin{matrix}-n, l+\frac{3}{4}, l+\frac{1}{4};\\ p+1, l-k+1:\end{matrix}\, t\right]$$

if $l>-\frac{1}{4}$ and $|t|<1$.

(*d*) Putting $m=\frac{1}{2}$ and $k=q$ we get

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x} T_p^n (xt) k_{2q}\left(\frac{x}{2}\right) dx$$

$$=\frac{(-1)^n}{n!}\cdot\frac{l[\Gamma(l)]^2}{\Gamma(p+1)\Gamma(q+1)\Gamma(l-q+1)}\, {}_3F_2\left[\begin{matrix}-n, l+1, l;\\ p+1, l-q+1;\end{matrix}\, t\right]$$

if $l>0$ and $|t|<1$.

3. Since

$$k_{2n}\left(\frac{x}{2}\right)=(-1)^{n-1} x e^{-\frac{x}{2}} {}_1F_1(1-n, 2; x)$$

for + *ve* values of n, we get by putting $\alpha=1-n$, $k=p$ and $\beta=2$,

$$\int_0^\infty x^{l-2} e^{-\frac{1}{2}x(1-t)} k_{2n}\left(\frac{xt}{2}\right) W_{p,m}(x)\, dx$$

$$=(-1)^{n-1} t\,.\frac{\Gamma(l+m+\frac{1}{2})\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\times$$

$$\times {}_3F_2[1-n, l+m+\tfrac{1}{2}, l-m+\tfrac{1}{2}; 2, l-k+1; t]$$

provided that $l\pm m+\frac{1}{2}>0$ and $|t|<1$.

(*a*) Putting $m=\frac{1}{2}$ and $k=p$ we get,

$$\int_0^\infty x^{l-2}\, k_{2n}\left(\frac{xt}{2}\right) e^{-\frac{1}{2}x(1-t)}\, k_{2p}\left(\frac{x}{2}\right) dx.$$

$$=(-1)^{n-1} t \cdot \frac{l\,[\Gamma(l)]^2}{\Gamma(p+1)\,\Gamma(l-p+1)}\, {}_3F_2\,[1-n, l+1, l; 2, l-p+1\,; t]$$

if $l>0$ and $|t|<1$.

(*b*) Put $m=\pm\frac{1}{4}$ and $k=p$.

The integral takes the form

$$\int_0^\infty x^{l-\frac{3}{4}} e^{-\frac{1}{2}x(1-t)}\, k_{2n}\left(\frac{xt}{2}\right) D_{2p-\frac{1}{2}}(\sqrt{2x})\, dx$$

$$=(-1)^{n-1}\sqrt{\pi}\,t,\, 2^{\frac{1}{2}-2l}\,\frac{\Gamma(2l+\frac{1}{2})}{\Gamma(l-p+1)}\, {}_3F_2\left[\begin{matrix}1-n,\ l+\frac{3}{4}, l+\frac{1}{4};\\ 2,\ l-p+1\,;\end{matrix}\ t\right]$$

provided that $l>-\frac{1}{4}$ and $|t|<1$.

(*c*) If $k=0$,

$$\int_0^\infty x^{l-\frac{1}{2}} e^{-\frac{1}{2}x(1-t)} k_{2n}\left(\frac{xt}{2}\right) K_m\left(\frac{xt}{2}\right) dx$$

$$=\sqrt{\pi}\,(-1)^n t\, \frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l+1)}\times$$

$\times\ {}_3F_2\,[1-n,\ l+m+\frac{1}{2}, l-m+\frac{1}{2},\ 2,\ l+1;\ t]$

provided that $l\pm m+\frac{1}{2}>0$ and $|t|<1$.

As a particular case, if we put $m=\frac{1}{2}$ and $t=1$, we get

$$\int_0^\infty x^{l-1} e^{-\frac{1}{2}x}\, k_{2n}\left(\frac{x}{2}\right) dx$$

$$=(-1)^{n-1}\frac{\Gamma(l)\,\Gamma(1+n-l)}{\Gamma(2-l)\,\Gamma(1+n)}$$

if $l>0$.

(*d*) Putting $k=p+\frac{1}{2}q+\frac{1}{2}$ and $m=\frac{q}{2}$ we get,

$$\int_0^\infty x^{l+\frac{1}{2}q-\frac{3}{2}} e^{-x(1-\frac{t}{2})}\, k_{2n}\left(\frac{xt}{2}\right) L_p^{\,q}(x)\, dx$$

$$=\frac{(-1)^{p+n+1}}{p\,!}\cdot t\cdot\frac{\Gamma\left(l+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(l-\frac{q}{2}+\frac{1}{2}\right)}{\Gamma\left(l-p-\frac{q}{2}+\frac{1}{2}\right)}\times$$

$$\times\ {}_3F_2\left[1-n,\, l+\frac{q}{2}+\frac{1}{2},\, l-\frac{q}{2}+\frac{1}{2};\ 2,\, l-p-\frac{q}{2}+\frac{1}{2};\ t\right]$$

if $l\pm\frac{q}{2}+\frac{1}{2}>0$ and $|t|<1$,

(i) By (β) we get

$$\int_0^\infty x^{l+\frac{q}{2}-\frac{3}{2}}\, e^{-x(1-\frac{t}{2})}\, k_{2n}\left(\frac{xt}{2}\right) T_q^{\,p}(x)\, dx$$

$$=\frac{(-1)^{n-1}}{p\,!}\,.\,t\,.\,\frac{\Gamma\left(l+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(l-\frac{1}{2}q+\frac{1}{2}\right)}{\Gamma\left(p+q+1\right)\Gamma\left(l-p-\frac{q}{2}+\frac{1}{2}\right)}\times$$

$$\times\ {}_3F_2\left[1-n,\, l+\tfrac{1}{2}q+\tfrac{1}{2},\, l-\frac{q}{2}+\frac{1}{2};\ 2,\, l-p-\frac{q}{2}+\frac{1}{2};\, t\right]$$

if $l\pm\frac{q}{2}+\frac{1}{2}>0$ and $|t|<1$.

4. Since

$$M_{k,m}(x)=x^{m+\frac{1}{2}}\, e^{-\frac{1}{2}x}\ {}_1F_1\left(m+\tfrac{1}{2}-k;\ 2m+1;\ x\right)$$

we get, on putting $\alpha=m-k+\frac{1}{2}$, $\beta=2m+1$ in (B)

$$\int_0^\infty x^{p-m-\frac{3}{2}}\, e^{-\frac{1}{2}x(1-t)}\, M_{k,m}(xt)\, W_{l,n}(x)\, dx$$

$$=\ t^{m+\frac{1}{2}}\,\frac{\Gamma(p+n+\frac{1}{2})\,\Gamma(p-n+\frac{1}{2})}{\Gamma(p-l+1)}\times$$

$$\times\ {}_3F_2\left[m-k+\tfrac{1}{2},\, p+n+\tfrac{1}{2},\, p-n+\tfrac{1}{2};\ 2m+1,\, p-l+1;\ t\right]$$

if $p\pm n+\frac{1}{2}>0$ and $|t|<1$.

(a) Putting $p=2m+n+\frac{1}{2}$ and $t=1$ we get,

$$\int_0^\infty x^{m+n-1}\, M_{k,m}(x)\, W_{l,n}(x)\, dx$$

$$=\frac{\Gamma(2m+2n+1)\,\Gamma(2m+1)\,\Gamma(k-m-l-n)}{\Gamma(\frac{1}{2}-l-n)\,\Gamma(1-k-l+m+n)}$$

where $R(m)>-\frac{1}{2}$, and $-\frac{1}{2}<R(m+n)<R(k-l)$

This result has been given by Erdelyi †

† A. Erdelyi: "Infinite Integral involving Whittaker's function" J. Ind. Math. Soc. III (1938) 168-81 (172)

(*b*) Putting $l=o$, we get

$$\int_0^\infty x^{p-m-1}\, e^{-\frac{1}{2}x(1-t)}\, M_{k,m}(xt)\, k_n\left(\frac{x}{2}\right) dx$$

$$=\sqrt{\pi}\; t^{m+\frac{1}{2}}\frac{\Gamma(p+n+\frac{1}{2})\Gamma(p-n+\frac{1}{2})}{\Gamma(p+1)}\times$$

$$\times\; {}_3F_2[\,m-k+\tfrac{1}{2},\, p+n+\tfrac{1}{2},\, p-n+\tfrac{1}{2}\;;\, 2\,m+1,\, p+1\;;\, t\,]$$

if $p\pm n+\frac{1}{2}>o$ and $|t|<1$.

(*i*) Put $m=\frac{1}{2}$ and $t=1$.

$$\int_0^\infty x^{p-m-\frac{3}{2}}e^{-\frac{1}{2}x}\, M_{k,m}(x)\, dx$$

$$=\frac{\Gamma(p)\;\Gamma(2m+1)\;\Gamma(m+k-p+\frac{1}{2})}{\Gamma(m+k+\frac{1}{2})\;\Gamma(2m-p+1)}$$

if $p>o$.

(*c*) Put $n=\frac{1}{2}$ and $k=l$. The integral becomes

$$\int_0^\infty x^{p-m-\frac{3}{2}}\, e^{-\frac{1}{2}x(1-t)}\, M_{k,m}(xt)\, k_{2l}\left(\frac{x}{2}\right) dx$$

$$=\frac{t^{m+\frac{1}{2}}\; p\{\Gamma(p)\}^2}{\Gamma(l+1)\;\Gamma(p-l+1)}\, {}_3F_2[m-k+\tfrac{1}{2}, p+1, p;\, 2m+1, p-l+1;\, t]$$

if $p>o$ and $|t|<1$.

(*d*) Putting $m=\pm\frac{1}{4}$ we get

$$\int_0^\infty x^{p-m-\frac{5}{4}}\, M_{k,m}(xt)\, e^{-\frac{1}{2}x(1-t)}\, D_{2l-\frac{1}{2}}(\sqrt{2}\,x)\, dx$$

$$=\sqrt{\pi}\; 2^{l-2p+\frac{1}{4}}\, t^{m+\frac{1}{2}}\; \frac{\Gamma(2p+\frac{1}{2})}{\Gamma(p-l+1)}\times$$

$$\times\; {}_3F_2[m-k+\tfrac{1}{2},\, p+\tfrac{3}{4},\, p+\tfrac{1}{4};\, 2m+1,\, p-l+1;\, t]$$

if $p>-\frac{1}{4}$, and $|t|<1$.

(*e*) Put $n=\frac{q}{2}$ and $l=\gamma+\frac{q}{2}+\frac{1}{2}$:

$$\int_0^\infty x^{p-m+\frac{q}{2}-1}\, e^{-\frac{1}{2}x(1-t)}\, M_{k,m}(xt)\, L_\gamma^q(x)\, dx$$

$$=\frac{(-1)^\gamma}{\gamma\,!}\, t^{m+\frac{1}{2}}\frac{\Gamma\left(p+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(p-\frac{q}{2}+\frac{1}{2}\right)}{\Gamma\left(p-\gamma-\frac{q}{2}+\frac{1}{2}\right)}\times$$

$$\times\ {}_3F_2\left[m-k+\tfrac{1}{2},\ p+\frac{q}{2}+\frac{1}{2},\ p-\frac{q}{2}+\frac{1}{2};\ 2m+1,\ p-\gamma-\frac{q}{2}+\frac{1}{2};t\right]$$

if $p \pm \frac{q}{2}+\frac{1}{2}>0$ and $|t|<1$.

(*f*) By virtue of (β) the integral becomes

$$\int_0^\infty x^{p-m+\frac{q}{2}-1} e^{-\frac{1}{2}x(1-t)} M_{k,m}(xt)\, T_q^{\gamma}(x)\, dx$$

$$=\frac{t^{m+\frac{1}{2}}}{\gamma\,!}\cdot\frac{\Gamma\left(p+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(p-\frac{q}{2}+\frac{1}{2}\right)}{\Gamma(q+\gamma+1)\,\Gamma\left(p-\gamma-\frac{q}{2}+\frac{1}{2}\right)}\times$$

$$\times\ {}_3F_2\left[m-k+\tfrac{1}{2},\ p+\frac{q}{2}+\frac{1}{2},\ p-\frac{q}{2}+\frac{1}{2};\ 2m+1,\ p-\gamma-\frac{q}{2}+\frac{1}{2};\ t\right]$$

if $p \pm \frac{q}{2}+\frac{1}{2}>0$ and $|t|<1$.

5. Since

$$\frac{(-1)^n\,\pi\,2^{2n+1}}{\Gamma(\frac{1}{2}-n)}\ {}_1F_1(-n\ ;\ 2n\ ;\ x)=e^{\frac{1}{2}x}\,x^{n+\frac{1}{2}}\,K_{n+\frac{1}{2}}\left(\frac{x}{2}\right)$$

for + ve integral values of n and $n \neq 0$, by putting $\alpha=-n$ and $\beta=-2n$ we get

$$\int_0^\infty x^{l+n-\frac{1}{2}}\,e^{-\frac{1}{2}x(1-t)}\,K_{n+\frac{1}{2}}\left(\frac{xt}{2}\right)W_{k,m}\left(\frac{x}{2}\right)dx$$

$$=\frac{(-1)^n\,\pi\,t^{-n-\frac{1}{2}}\,2^{2n+\frac{1}{2}}}{\Gamma(\frac{1}{2}-n)}\cdot\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(l-k+1)}\times$$

$${}_3F_2\left[-n,\ l+m+\tfrac{1}{2},\ l-m+\tfrac{1}{2};\ -2n,\ l-k+1\ ;\ t\right]$$

if $l \pm m+\frac{1}{2}>0$ and $|t|<1$.

(*a*) Put $k=0$. Then the integral becomes

$$\int_0^\infty x^{l+n}\,e^{-\frac{1}{2}x(1-t)}K_{n+\frac{1}{2}}\left(\frac{xt}{2}\right)K_m\left(\frac{x}{2}\right)dx$$

$$=(-1)^n\sqrt{\pi}\,t^{-n-\frac{1}{2}}\,2^{2n+1}\,\frac{\Gamma(l+m+\frac{1}{2})\,\Gamma(l-m+\frac{1}{2})}{\Gamma(\frac{1}{2}-n)\,\Gamma(l+1)}\times$$

$$\times\ {}_3F_2\left[-n,\ l+m+\tfrac{1}{2},\ l-m+\tfrac{1}{2};\ -2n,\ l+1\ ;\ t\right]$$

if $l \pm m+\frac{1}{2}>0$ and $|t|<1$.

(*b*) Putting $m= \pm\frac{1}{4}$, we get

$$\int_0^\infty x^{l+n-\frac{1}{4}} e^{-\frac{1}{2}x(1-t)} K_{n+\frac{1}{2}}\left(\frac{xt}{2}\right) D_{k-\frac{1}{2}}(\sqrt{2x})\,dx$$

$$=(-1)^n\, 2^{2n+k-2l+\frac{1}{4}}\,\pi\sqrt{\pi}\, t^{-n-\frac{1}{2}} \frac{\Gamma(2l+\frac{1}{2})}{\Gamma(\frac{1}{2}-n)\,\Gamma(l-k+1)}\times$$

$$\times\ {}_3F_2[-n,\, l+\tfrac{3}{4},\, l+\tfrac{1}{4};\, -2n,\, l-k+1\,;\, t\,]$$

if $l > -\frac{1}{4}$, and $|t| < 1$.

(*c*) Put $m=\frac{1}{2}$ and $k=p$. The integral takes the form

$$\int_0^\infty x^{l+n-\frac{1}{2}} e^{-\frac{1}{2}x(1-t)} K_{n+\frac{1}{2}}\left(\frac{xt}{2}\right) k_{2p}\left(\frac{x}{2}\right) dx$$

$$=\frac{(-1)^n\,\pi.\,l.\,2^{2n-1}[\,\Gamma(l)\,]^2}{t^{n+\frac{1}{2}}\,\Gamma(p+1)\,\Gamma(\frac{1}{2}-n)\,\Gamma(l-p+1)}\times$$

$$\times\ {}_3F_2\,[-n,\, l+1,\, l;\, -2n,\, l-p+1;\, t\,]$$

if $l>0$ and $|t| < 1$.

6. Since

$$I_n(x) = \frac{e^x}{\Gamma(n+1)}\left(\frac{x}{2}\right)^n {}_1F_1\,(\tfrac{1}{2}+n;\ 1+2n;\ -2x)$$

for + ve integral values of n, the integral becomes

$$\int_0^\infty x^{\nu-1} e^{-\frac{x}{2}(t+1)}\, W_{k,m}(x)\, I_n\left(\frac{xt}{2}\right) dx$$

$$=\frac{t^n\ \Gamma(n+\nu+m+\frac{1}{2})\ \Gamma(n+\nu-m+\frac{1}{2})}{2^{2n}\ \Gamma(n+1)\ \Gamma(n+\nu-k+1)}\times$$

$$\times\ {}_3F_2\,[n+\tfrac{1}{2},\, n+\nu+m+\tfrac{1}{2},\, n+\nu-m+\tfrac{1}{2};\, 2n+1,\, n+\nu-k+1;\ -t]$$

provided that $n+\nu\pm m+\frac{1}{2} > 0$ and $|t| < 1$.

(*a*) Put $m=\frac{1}{2}q$ and $k=p+\dfrac{q}{2}+\dfrac{1}{2}$.

By (*a*) we get

$$\int_0^\infty x^{\nu-1} e^{-\frac{1}{2}x(t+1)}\, I_n\left(\frac{xt}{2}\right) L_p^q(x)\, dx$$

$$=\frac{(-1)^p\ t^n}{p\,!\,2^{2n}}\cdot\frac{\Gamma\left(n+\nu+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(n+\nu-\frac{q}{2}+\frac{1}{2}\right)}{\Gamma(n+1)\ \Gamma\left(n+\nu-p-\frac{q}{2}+\frac{1}{2}\right)}\times$$

$$\times\ {}_3F_2\,[n+\tfrac{1}{2},\, n+\nu+\tfrac{q}{2}+\tfrac{1}{2},\, n+\nu-\tfrac{q}{2}+\tfrac{1}{2};\, 2n+1,\, n+\nu-p-\tfrac{q}{2}+\tfrac{1}{2},\, -t]$$

if $n+\nu\pm\frac{q}{2}+\frac{1}{2} > 0$ and $|t| < 1$.

(*b*) By virtue of (β) we get

$$\int_0^\infty x^{\nu-1}\, e^{-\frac{1}{2}x(t+1)}\, I_n\left(\frac{xt}{2}\right) T^p_q(x)\, dx$$

$$=\frac{t^n\, \Gamma\left(n+\nu+\frac{q}{2}+\frac{1}{2}\right)\Gamma\left(n+\nu-\frac{q}{2}+\frac{1}{2}\right)}{2^{2n}\, p!\, \Gamma(p+q+1)\,\Gamma(n+1)\,\Gamma\left(n+\nu-p-\frac{q}{2}+\frac{1}{2}\right)}\times$$

$$\times\ {}_3F_2\left[\begin{matrix} n+\frac{1}{2},\ n+\nu+\frac{q}{2}+\frac{1}{2},\ n+\nu-\frac{q}{2}+\frac{1}{2}\ ; \\ 2n+1,\ n+\nu-p-\frac{q}{2}+\frac{1}{2}\ ; \end{matrix}\ -t\right]$$

if $n+\nu\pm\frac{q}{2}+\frac{1}{2}>0$ and $|t|<1$.

(*c*) Putting $m=\pm\frac{1}{4}$ we get,

$$\int_0^\infty x^{\nu-\frac{5}{4}}\, e^{-\frac{1}{2}x(t+1)}\, I_n\left(\frac{xt}{2}\right) D_{2k-\frac{1}{2}}(\sqrt{2x})\, dx$$

$$=\frac{t^n\,\sqrt{\pi}\; 2^{k-2n-2\nu+\frac{1}{4}}\;\Gamma(2n+2\nu+\frac{1}{2})}{\Gamma(n+1)\;\Gamma(n+\nu-k+1)}\times$$

$\times\ {}_3F_2\,[n+\frac{1}{2},\ n+\nu+\frac{3}{4},\ n+\nu+\frac{1}{4}\ ;\ 2n+1,\ n+\nu-k+1\ ;\ -t]$
if $n+\nu>-\frac{1}{4}$ and $|t|<1$.

A particular case of this result for $t=1$ has been given by Varma (ibid)

(*d*) Putting $k=0$ we get,

$$\int_0^\infty x^{\nu-\frac{1}{2}}\, e^{-\frac{x}{2}(t+1)}\, I_n\left(\frac{xt}{2}\right) K_m\left(\frac{x}{2}\right) dx$$

$$=\frac{\sqrt{\pi}\,t^n}{2n}\cdot\frac{\Gamma(n+\nu+m+\frac{1}{2})\;\Gamma(n+\nu-m+\frac{1}{2})}{\Gamma(n+1)\;\Gamma(n+\nu+1)}\times$$

$\times\ {}_3F_2\,[n+\frac{1}{2},\ n+\nu+m+\frac{1}{2},\ n+\nu-m+\frac{1}{2}\ ;\ 2n+1,\ n+\nu+1;-t]$
if $n+\nu\pm m+\frac{1}{2}>0$ and $|t|<1$.

(*i*) For $t=-1$ we get

$$\int^\infty x^{\mu-1}\, I_n\left(-\frac{x}{2}\right) k_m\left(\frac{x}{2}\right) dx$$

$$= (-1)^n 2^{2\mu-2} \frac{\Gamma(1-\mu)\,\Gamma\left(\frac{n}{2}+\frac{\mu}{2}+\frac{m}{2}\right)\Gamma\left(\frac{n}{2}+\frac{\mu}{2}-\frac{m}{2}\right)^*}{\Gamma\left(1+\frac{n}{2}-\frac{\mu}{2}-\frac{m}{2}\right)\Gamma\left(1+\frac{n}{2}-\frac{\mu}{2}+\frac{m}{2}\right)},$$

on using the formula

$${}_3F_2\,[\,a, b, c; \tfrac{1}{2}(a+b+1), 2c; 1\,]$$

$$= \frac{\Gamma(\frac{1}{2})\,\Gamma(\frac{1}{2}+c)\,\Gamma(\frac{1}{2}+\frac{1}{2}a+\frac{1}{2}b)\,\Gamma(\frac{1}{2}-\frac{1}{2}a-\frac{1}{2}b+c)}{\Gamma(\frac{1}{2}+\frac{1}{2}a)\,\Gamma(\frac{1}{2}+\frac{1}{2}b)\,\Gamma(\frac{1}{2}-\frac{1}{2}a+c)\,\Gamma(\frac{1}{2}-\frac{1}{2}b+c)}$$

giving by Bailey†

(*e*) Putting $m=\frac{1}{2}$ and $k=q$ we get

$$\int_0^\infty x^{\nu-1}\, e^{-\frac{1}{2}x\,(t+1)}\, I_n\left(\frac{xt}{2}\right) k_{2q}\left(\frac{x}{2}\right) dx$$

$$= \frac{t^n\,(n+\nu)\,\{\Gamma(n+\nu)\}^2}{2^{2n}\,\Gamma(q+1)\,\Gamma(n+1)\,\Gamma(n+\nu-q+1)} \times$$

$$\times {}_3F_2\,[n+\tfrac{1}{2}, n+\nu+1, n+\nu; 2n+1. n+\nu-q+1; -t]$$

provided that $n+\nu>o$ and $|\,t\,|<1$.

I should like to thank Dr. B. Mohan for his kind suggestions and help in the preparation of this note.

* This is a particular case of MAC ROBERTS' integral given in "Some Integrals involving Legendre and Bessel functions." *Q.J.M.* 11 (1940) 95-100.

† W. N. BAILEY : Generalised Hypergeometric Series *Camb : Tract in Math. and Mathematical Physics* No. 32. (1935)

SRI ŚANKARA'S IDEALISM AND ITS MESSAGE TO OUR TIMES[1]

By P. NAGARAJA RAO, M.A.

PART I

OF the systems of Indian Philosophy, the most impressive is the Advaita Vedānta outlined by Śankara. It is a cogent exposition of the central thoughts enshrined in the Upaniṣads, the Gītā and the Vedānta Sūtras. It has been acclaimed by tradition as the crowning achievement of Indian philosophic thought. Besides it has to a very great degree influenced world's thought. The German renaissance repre-sented by Schopenhauer, Hartmann and Nietzsche; the American renaissance represented by Emerson, Thoreau and Walt Whitman; the Irish renaissance in the persons of W. B. Yeats, G. W. Russell and George Moore have been definitely influenced by the Central teaching of Śankara.

The philosophy of Śankara is presented under the modest title of commentaries on the triple authorities. The most important of the commentaries are on the two major Upaniṣads, *Bṛhadāraṇyaka* and *Chāndogya*. Śankara's *magnum opus* is his commentary on the Vedānta Sūtras.

He was by no means the originator of the school of Advaita philosophy. His master's master Gauḍapāda had set forth the rudiments of Advaita in his *Kārikās* on the *Māṇḍūkya Upaniṣad*. Maṇḍana, an elder contemporary of Śankara had worked out a form of Advaita in his *Brahma-siddhi*. Śankara was influenced greatly by their writings.

§2

The central tenets of Śankara's system can be formulated in three propositions: (1) Brahman is the real, (2) the universe is illusory (mithyā) and (3) the individual soul is non-different from Brahman.

The supreme Reality is Brahman. Brahman is not definable because definition presupposes a related category. There is nothing besides Brahman that is real. The mere fact that

[1] Substance of the two lectures delivered at the Benares Hindu University to the post-graduate philosophy students, 20th and 25th of November, 1941.

Brahman cannot be qualified has not led the Advaitin to deny Brahman. Brahman can be experienced without being known. It is self-menifest (svaprakāsa). But for its light, declares the Upanisad, there can be no light for the sun.[2] It is the ground of existence and the goal of life. It is the prime substance.

Though Brahman is not definable in the strict sense of the term 'definition', still some form of definition which will be helpful in indicating Brahman is attempted. There are two types of such definition. They are *svarūpa-lakṣaṇa* and *taṭastha-lakṣaṇa* Scriptural statements like 'satyam jñānam anantam Brahma' describe Brahman in terms of its own self. Brahman is not knowledged but is knowledge. Brahman is bliss and infinitude. Even these terms must be understood as indicating Brahman through the exclusion of the unreal, the inert and the finite. The import of the proposition is identity and not prediction

The second type of definition describes the object in terms of an attribute that does not intrinsically belong to the object defined ; e. g., suppose some one asks me where one Devadatta's house is. Perceiving a craw perching on Devadatta's house I tell the enquirer that 'the yonder house on which the crow sits is Devadatta's house'. Meanwhile the crow flies away. The attribute was useful in pointing out Devadatta's house to the enquirer. All the scriptural statements that describe Brahman as the originator, sustainer, etc., of the universe are instances of the second type of definition.

§3

Here it may be asked, why the śrutis should not be directly interpreted. Why not accept that Brahman is the creator, sustainer, etc., of this universe. The demands of logic make Śankara interpret scriptural statements in a secondary fashion.

Creation involves the consideration of the logical concept of cause and effect. The Nyāya school held the view that the effect is something entirely different from the cause. It is a creation *de novo*. Such a view of causation is not logically sound. It is criticised as follows : 'Is there a time interval between cause and effect? If there is, does the cause wholly cease to exist, before the effect comes into being? In that case the immediate antecedent of the product would be a type of non-existence. Though we may in speech, distinguish between the non-existence of *x*, from the non-existence of *y*, there is in reality no way of distinguishing one non-existence from another.

If creation is not a *de novo* effect, it can be conceived as potential and pre-figuring in the cause. Creation is concieved as the manifestation of what is potential in the cause by the Sānkhyans. This goes by the name *parināma-vāda.* Such a position is intelligible to a large degree, for we always seek the appropriate cause for the appropriate effect. One who wants curds seeks milk and not water,

This too is not sufficiently logical for Śankara, but at the same time he makes it the jumping-board for his theory.[1] He refutes the theory as follows :— "Granting that the effect is the manifestation of the cause : Before the manifestation, was the effect existent, or not ? If it was already existent, then the casual operation becomes superfluous. If it is not existent, then there must be a cause for the manifestation, and that in its turn will need another cause. Thus it lands in the fallacy of *infinite regress.* Hence Śankara holds that the cause-effect relation is not ultimately tenable, though it works with great effect in the empirical world. Cause and effect are not two entirely different things. The effect is the illusory manifestation of the cause. The relation between cause and effect is that type of relation that subsists between the ground and its consequent. The effect in reality is non-different from the cause (ananya).

§ 4

If Brahman is not to be conceived as the cause of the world of plurality, how then to account for the world ? The answer to this question is the baffling expression māyā (nescience). It is beginningless and positive (anādi and bhāva rūpa). Finite cognition, the categories of human thought, the instruments of knowledge, and scriptural statements are all the products of nescience.[2] Nescience is called *adhyāsa* (super-imposition). Śankara describes it at great length in his introduction to the commentary on the Vedānta sūtras. There he points out with great persuasive skill, and striking cogency that the entire social intercourse of men (lokavyāvahāra) presupposes nescience. Nescience is a fact of everyday experience. Though our true self is bliss-existence-reality (saṭcit-ānanda) still an account of nescience, we superimpose the ills of the body on the soul. When the body is ill we say 'we are ill,

[1] "Vivarta vādasya hi pūrvabhūmir
vedānta vāde pariṇāma vādaḥ
Sarvajñātman's *Samkeṣpa-śarīraka*, II. v. 61.

[2] Śaṅkara's *Adhyāsa Bhāṣya*

when the body lacks the sense of hearing we say 'we are deaf' etc. Thus there is a confusion between the self and the non-self. Unless we superimpose ourselves on our sense organs, we cannot become knowing subjects. The knowing subjects need sense organs to know things about us. Knowledge pre-supposes a knowing subject, a known object and the means of knowledge. All these are not possible without the assumption of reciprocal super-imposition of the self with not-self and *vice-versa.* It is this nescience that is the cause of all social intercourse. To escape from the nescience we must realise the great truth of vedānta that the individual soul is non-different from Brahman.[1]

§ 5

Now what exactly is the status of this nescience-ridden world? Does it get annulled in Brahman or transformed into it? Is it as real, as its ground, Brahman? What is its relation to Brahman?

Śankara formulates two general principles namely the absolutely real is not sublated and the absolutely unreal is not cognised. The example for the first is Brahman, and, for the second is barren woman's son, and the horns of a hare. The world of plurality is sublated in sleep, so it is not real. It is cognised, so is not unreal. It turns out to be not real, and not-unreal. Such a position violates the Law of contradiction. Hence it is said to be (anirvācya) indeterminable. The indeterminability of the universe has to be carefully interpreted. It is indeterminable only in terms of the real and the unreal. It does admit of all other types of relations. The criticism that the world of plurality is serviceable in life and answers to the pragmatic test does not go against the *Advaitin's* position. In fact pragmatic utility belongs only to the world of plurality and not to Brahman.

Nescience has two functions, it suppresses the nature of the object and shows up in its place some other thing. It is due to its operation that Brahman appears as many jīvas. Jīvahood (empirical selfhood) is the locus as well as the result of the functioning of nescience. If it be objected to, that the conception of jīvahood is not possible without nescience, and that in its turn nescience needs a locus, the resourceful *advaitin* retorts that the relation between Jīva and nescience is beginningless. If it be further objected that the concept of nescience is unintelligible the answer is that its very nature is so. The

1. Ibid.

non-intelligibility (avidyātvam) of avidya (nescience) is acceptable to the *advaitin.*

It is interesting to note that a later advaita thinker, Rangaraja, (the father of Appayya Dīkṣit) in his work *Advaita vidyā mukura* states "that the business (of the advaitin) is not to demonstrate the illusoriness or anything else. When we have demonstrated that all other positions are untenable, we are left with the witness of the condemnation. The mention of definitions and proofs is only in order to conform to the intellect of our opponent. We do not base our final conclusion on the intellect, since non-dualistic realisation can come only through the grace of the Lord."[1] This points out that the Advaita of Śankara is neither dogmatic, nor sceptical. Scepticism Prof. Bradley defines 'I mean by scepticism the mere denial of any known satisfactory doctrine together with the personal despair of any future attainments.'[2] Śankara is not a *sceptic* in this sense, for he affirms the reality of the advaitic experience.

But this does not mean that in the world of plurality the categories of knowledge are not valid. The category of cause does obtain in the world. 'As long as we live in the world of nescience we have no right to impugn causality. It is as objective as the world is; even for the very transcendence of nescience we depend on this concept of cause such as, instruction, reflection, contemplation etc. If these are not well-settled causes they could not be depended on by us, in our laudable endeavour to realise ourselves. The causal rigidity in the empirical world is consistent with the denial of casuality in the transcendental world'.[3]

The anti-phenomenalists have pointed out that the illusory cannot have the capacity to lead to correct knowledge. But the broad testimony of scientific theory which expresses itself in a series of hypothesis point out to the truth that error most often is the gateway to truth. There is the famous śāstric example of the bamboo which burns the forest burning itself

[1] Prof. S. S. Suryanarayana Sastri's article on *Advaita Vidyāmukura*, *in J.O.R.*

"Na hy asmābhir mithyātvam anyad vā kiñcin nirūpaṇīyam asti. param nirūpyamāṇa prapañca khaṇḍanenaiva vayamiha caritārthāḥ. Tatra tatra lakṣaṇā-' bhidhānam tu para buddhyanurañja naya........advaitasiddhau Cā' asmakam nā'-tīva Lakṣaṇa Pramāṇa adaraḥ Īśvarānugrahaika-labhayatvāt".

[2] F. H. Bradley's *Essay on Truth and Reality*, p. 445.

[3] Prof. S. S. Sastri's Article on *Advaita, Causality and Human Freedom in Indian Historical Quarterly*, vol. xvi, 1940.

too. Thus the illusory nature of the pramāṇas does not stand in the way of Advaita realisation. With the removal of nescience the individual soul realises Brahman, and the world of plurality gets transformed into Brahman.

§ 6

Traditional interpreters of Advaita doctrine hold that the world of plurality is annulled in Brahman. But such an interpretation makes no sense of appearance. Śankara seems not to favour the view that the world of plurality is somehow transformed into Brahman. The transmutation theory of Bradley is very near the heart of Śankara 'sarvaṁ khalvidam Brahma.' The world is non-different (ananya) from the cause Brahma.[1] Nothing that is in this world of ours is left without being Brahmanised. "Every flame of passion, chaste or carnal, would still burn in the absolute unquenched and unabridged, a note absorbed in the harmony of its higher bliss."[2]

But how do these appearances get transmuted? Bradley says it does *somehow*, and Śankara says it is "*anirvachya*" (indescribable). Both regard that for the realisation of the Absolute, we must transcend the intellectual process.

Reality and existence, says S. Radhakrishnan, are not to be set against each other as metaphysical contraries. Nothing on earth is utterly perfect or utterly without perfection. Those who have the vision of perfection strive continually to increase the perfection and diminish the imperfection."[3]

The relation between appearance and Reality must be organic. If the two realms do not hang together "the absolutist philosophy is an irrelavent night-mare."

§ 7

Besides the pure Brahman which is the ground as well as the goal of existence, Advaita tradition admits the existence of a personal God that is Īśvara. Īśvara the God of religion comes in between the empirical selves and the transcendental Brahman. All the scriptural passages that enumerate the functions of the Lord refer to Īśvara. Worship of this Saguna Brahman (qualified Brahman) is insisted on as a stage on the road to realisation. The realiance of the Advaitin on scripture as a Pramāna is firm. It is not inference that establishes the

[1] Cf. Śaṅkara's Commentary, Vedānta sūtra, Chap. II. 1. 14.

[2] F. H. Bradley's *Appearance and Reality*, p. 172.

[3] S. Radhakrishnan, *Eastern Religions and Western Thought*. p. 81.

existence of Brahman or Iśvara. It is śruti, that is the ultimate pramāna in respect of Brahman knowledge (of course purportful śrutis and not the entire veda).[1]

It is wrong to hold, as some that the Iśvara of Advaita is on no higher plane than the nescience-ridden individual self Without the grace of the Lord'Advaita realisation nay, not even an inclination towards the non-dualist frame of mind is possible, says Śrīharṣa.[2] Madhusūdana in concluding his monumental work (*Advaita-siddhi*) stresses the inevitable human need for a personal God, who is the abode of an infinite number of auspicious attributes. He says that he is satisfied with the colourful personality of the Lord with the flute on his lips.[3]

The God of Advaita is the efficient cause of the universe and nescience is the material on which He works. He is the cause of the great lore which is contained in the Vedas.[4] He is the intelligent principle of consciousness (caitanya) without which the universe cannot be accounted for. A non-sentient matter (Prakṛti) and the mere presence of unattached Puruṣas of the Śānkhyan school cannot an intelligible account for the universe. Nor is the Universe created by a colony of atoms (paramānu-puñja).

The God of Advaita does not act from any selfish motives. It is His līla (sport). It is the overflow of His goodness. He is not subject to the limitation of māyā as the individual soul is. He is the *māyin*. Māyā is the energy and He is the energiser. Between the energiser and the energy there is non-difference. If we do not admit the existence of God, we will not be able to account for the existence of the world. "Reality is not less, but more than God; not by eschewing God, but by realising, and transcending Him can we realise self; for, the world is god-dependent; and to ignore God may well lead to the world asserting itself as if independent, and weighing us down, as in samsāra; release requires therefore the realisation, first of the dependence of the world on

[1] Tātparyavatī hi śrutiḥ Pratyakṣād balavatī, na śrutimātram
Bhāmat. p. 14

[2] *Khaṇḍana-khaṇḍa-khādya.*
Chap. I. v, 21.
Iśvarārugrahadeśa Pumsām advaita
vāsana

[3] Cf. *Advaita Siddhi.*

[4] Śāṅkara's commentary on the *Vedānta Sūtras*, 1. 1. 3.
Cf. Plato's theroy of creation in his *Timaeus*

God, and then of God being an appearance of Brahman."[1]

Brahman in relation to the world is Īśvara (that is the *saprapānca* view.) When he transcends the world he is Brahman. The entire world of appearance which is negated later on must be something even for being negated. Even the relative reality which the world possess must be related to Brahman, because there is nothing besides Brahman that is real.

Śankara in his commentary on the *Bṛhadāraṇyaka*[2] points out "the unconditioned self, being beyond speech and mind, undifferentiated and one is designated as "not this, not this," when it has the limiting adjuncts of the body and organs which are characterised by imperfect knowledge, desire, and work is called the empirical individual self; and when the self has the limitations of the creative power manifesting through eternal and unlimited knowledge it is called the inner ruler (antaryāmin) and the divine person. The same self, as by its nature transcendent, absolute and pure, is called the immutable and supreme self (Brahman).[3]

Śankara realised that men at all stages of life cannot begin with the Absolute of philosophy. So as a necessary step to it, he has given us 'the logical theism with Īśvara at its head.[4]

§ 8

The Advaita conception of mokṣa (salvation) is something unique. In all theistic creeds salvation is something that is derived through the grace of the Lord at some distant date. The individual soul has to lead an unremitting moral life, before it can secure God's grace. Ceremonial purity and ethical excellence are the pre-requisites for salvation. The discharge of Scripture-ordained duties is laid down as the aim of moral life. In short salvation is not something that has to be produced. According to Śankara it is more an experience than an object. It is not derivative. It is native to the soul. It is the process of self-discovery.[5]

[1] Prof. S. S. Suryanarayana Sastri's *Śankaracharya*. p. 96-97.

[2] Cf. *Bṛhadāraṇyaka Up*. iii. 8. 12

[3] S. Radhakrishnan's *Eastern Religions and Western Thought*, p. 29.

[4] S. Radhakrishnan's *Indian Philosophy*, vol. 2, p. 657.

[5] S. Radhakrisnnan's *Eastern Religions and Western* Thought, p. 25.

Cf. St. Augustine writes : "I Lord, went wandering like a strayed sheep, seeking thee with anxious reasoning without, whilst thou wast within me........ I went round the streets and squares of the city of this world seeking thee, and I found thee not, because in vain I sought for him who was within myself'

The atheistic section of humanity has identified man, with the physical (dissolved him into a few pounds of carbon, a mixture of salts, sulphur etc.). Others have identified man with the sense organs. Man is a body and a mind. All the theistic schools of Indian Philosophy have identified man with something that is non material, and spiritual. They hold that the souls are immortal and many in number and that the grace of the Lord is the sole means for the salvation. Advaita identifies man not with the empirical self (jīvā) who is delimited by nescience. The real self of man is, Brahman and ignorance of this knowledge is called māyā. Māyā, is the wrong identification of the essential in man with the non-essential. Jñāna (knowledge) of the central truths of vedānta and uninterrupted meditation of it leads us to the true discovery of the self. Mokṣa is just like the finding of the forgotten golden ornament around one's neck.

It is this self-discovery that is called in other words self-realisation. This in the last analysis is a matter of experience. It is not necessary that one must tread the path of rituals. It cannot be earned by religious sacrifices, because it is not something that is produced. It is there already. We have only to become aware of it. *Mukti* is the birth right of all the souls. The doctrine of universal salvation (sarva mukti) is in accord with the spirit of Śankara's thought.

It is this universal and non-dogmatic nature of Advaita thought, that has made it acceptable to the best minds of the world. Romain Rolland says 'the only religion that can have any hold is the rationalisitc religion of Advaita.'

PART II

No doubt the philosophy of Advaita and the view of life it inculcates had on attraction to the world of arcadian simplicity untouched by the transforming and revolutionary character of our machine age, which has ushered in the Brave New World. Has the Advaita any message to our distracted passion—torn and war-shattered world, can the Advaita rival, supplement or correct the solutions set forth by the secular savants of humanity for the rescue of mankind from the present slough, can it give us material enough to build and rear up an enduring new social order, wherein men and women will be united in their loyalty to the supreme ideal of truth and in their resolution to put it in practice for the welfare of mankind ?

We shall presently answer these questions in the affirmative. But, before doing so we shall have to examine and criticise the merits and demerits of the solutions attractively set forth by the secular savants of humanity as efficient foundations for the new world order.

Taking the scientists of today first, they divide into three distinct groups in respect of their Philosophical views. A certain section are in almost complete agreement with the philosophy of Advaita. They assert that modern Physics and Mathematics lead to the acceptance of the spiritual nature of Reality, that science finds its sanctions in philosophy, that a new social order can be reared up only on the basis of a sound religion. The chief representatives of this school are Eddington Jeans and Einstein.

(b) Another group are out and out materialists. They style themselves impenitent rationalists and profess complete loyalty to science. They rest content with tangible evidence and laboratory proof. They do not admit the reality of the hyper-physical and the super-sensuous. They declare that there is no point in life nor purpose at the heart of the universe. Life they say is bound to go the way of all other creature mortality is the stamp that is deeply laid on every thing in the world. They depict man as nothing more than a petty impotent and crawling creature on the planet. He is powerless against the forces of Nature though he can for a time circumvent them. They say that man's moral outlook is determined by the relative functioning of his glands. 'Man', they declare, 'is in the grip of fate and has to fight an hostile universe. There is no inherent purpose in the process of Reality.' They say that Religion is created to comfort man and make him keep on live. They exhort us to live as best as we can. They tell us there is no absolute truth and that values are relative. Morality is conceived as the dictate of expediency. They ask us not to worry about the future. They say "let us learn to gather sloes in their season, to sheer sheep, and draw water from spring with grateful happiness, and no longer vex our souls with impossible longings." They further say that main's freedom is just myth, and that everything in the universe from the movements of atoms to the events of History are governed by laws. The sceptics, the Agnostics, and the Naturalists belong to this group. This outlook is set forth in elaborate academic technique in Mechanist Physics, Mechanist Biology, Behaviourism, Psychoanalysis and Dialectical Materialism of Marx.

(c) Scientific Humanists constitute the third group. Unlike the impenitent and dogmatic scientists they accept that science with its foot rule and the scale cannot know all that is in Reality. Certain entities called Values—Truth, Beauty, Goodness—cannot be quantitatively determined. Humanists admit the existence of Values and their significance to life. The supreme value for the humanists is the greatest happiness of the greatest number. To secure that he sets to reorder society by intelligently planning the production and distribution of the goods of the earth. The reordering is necessary because of the possessive impulses in men. Some men get all the things of the world and leave nothing for others. Hence the phenomena of the Haves and Have-nots. If men are resonable and positively scientific in their outlook, the humanist believes that they cease to be acquisitive. If once the possessive impulses is burnt up, it is easy for us to usher in the New Social Order. Civilisation for them consists in making two blades of grass grow where there formerly grew one.

(1) Communism is the chief variety of scientific Humanism. Its metaphysics and dialectics are of the materialist variety. The aim of the communist is to build a new social order where there would be model houses and higher wages. He, like the humanist, points out that our present society is largely based on the pernicious instinct of acquisitiveness. The few men at the top take such a large share of the goods of the world that a vast majority, that toil all day long get not even a meagre subsistence wage. It is this inequitable distribution of wealth that is responsible for the armies of the unemployed, for the presence of poverty amidst plenty, and for the rotting of wheat and the burning of coffee. Prof. R. H. Tanney points out that the entire economy of the world is managed by the skill and the capital of fifty men. 'If a Lord Milchet smiles there is sunshine and happiness in ten thousand houses, if a Lord Morgon frowns two continents are plunged in gloom.' It is this sorry state of affairs that has made the communist declare himself against the existing social order. They want to bring out a new social order, which guarantees a minimum economic security to all.

The methods to be employed for bringing about such a social order, the communist says, are not persuation and non-violence. The owners

of Money Power will not part with their possessions in response to the appeal of sweet reasonableness. Hence, the need for an active violent revolution, to overthrow the men in possession of power. Violence declared Marx is the midwife of a new social order. It is the only means to liquidate all opposition. The communist is absolutely distrustful of religion and philosophy. Marx has a standing indictment against philosophers. "They interpret Reality and do not change it. Further the communist believes that religion has helped the capitalists to grow stronger, because religion is a fine substitute for higher wages." Religion it is declared, "is the soul of the soulless conditions, the heart of the heartless world and the opium of the mind." The new social order of the communists is a paradise where every one will have enough to eat and where hard heads will rest on soft pillows.

(2) There are a great many scientific humanists who are not communists. They all want the establishment of an eagalatarian society. This they hope to achieve by peaceful settlements and not by violence. The Fabian socialists and Bertrand Russel belong to this school. Through constitutional methods and regional arrangement they hope to usher in the New Social Order. The Federal Union Society in America and its exponent Clarence K. Streit's, *Well's declaration of the Rights of Man* and Brailsford's *Towards a New League'* are some of the prominent attempts in this direction. They look forward to the establishment of a world state. Some of them have drawn an elaborate constitution for the world state that has to emerge.

(3) Humanists (other than the communists and constitutionalists) exhort us to lead enlightened life. They hold that the present world is intolerable and insensitive to values. They plead for the cultivation of careful tastes and a calculated indulgence of passions. "No God must be cheated and none overpaid." We are asked to escape to the world of art and poetry as a source of relief from the intense boardom of the sickly world. They declare what else can man do except escape from the dreadful world of 1942. Escapism into

Literature and poetry and art are held as the ideal basis for a new social order.

II

The theistic religions of the world claim that adherence to each of them will bring about the New Social order. All the denominational religions are intolerent of each other, and claim exclusive possession of Truth and the means to attain it. Each variety of theism has its own prophets and revelation. Each of them hold that their religion is true and that of others are false. Hence the antoganism between religions, its crusades and programme of proselytism. The 'affirmative' theologies have allied themselves with the state for securing their adherents. These theologies in general declare that the entry in to the kingdom of Heaven can only be secured by the grace of the Lord through the intermediary namely the prophet. Most of these religions hold that other religionists go to hell. They divide mankind into the elect and the condemned. Each religion has its own view of life and it expects totalatarian loyalty from its members. Human conduct is regulated on the basis of a theory of reward and punishment. They paint heaven and hell in deep colours. The dogmatic theologians speak in tomes of certainty about God and His dwelling place. Their God is a magnified human person with all the passions of a human being. 'God is depicted as a Father who has His favourite children to whom he communicates his mind. We have enough such religions says Swift to hate one other.

The political version of these dogmatic religions is the totalatarian state. The Facists and Nazis have their supermen who promise their countrymen the establishment of the millenium. They take the place of the prophets and the saviours. They demand absolute and exclusive loyalty. They substitute for the kingdom of Heaven, the glory of an empire, the setting right of an injustice or the superiority of a race. The totalatarian cults are more fanatical than any religion. They have taken advantage of the undermining of men's faith due to the advance of scientific materialism and the corruption of the churches. They also have known that the human need to believe cannot be eradicated. 'If man cannot find a God in heaven, he must fall down before a God on earth. That God on earth turns out to be a Hitler or Mussolini or Stalin. They tell us that the task of building up a new social order is too much for an ordinary man and woman.' We can build the New Social Order only by following the leadership of a Fuehrer or a Duce. The purpose of Humanity is the noble man

or superman and others must yield to it. They alone can create and rear up a new social order.

PART III

Amidst this welter of secular solutions what chance has Advaita. All the secular solutions share one defect in common namely they have a partial and defective view of man. They believe that man is a body plus a mind. They do not take note of the existence of the spirit in man that makes his body and mind operate. The scientific materialist forgets that the very formulation in intellectual terms of his theory is due to the creative power of the spirit. Science suffers from some serious limitations and it is good that we avow it instead of recklessly repudiating it. The category of Mind, Purpose and Value are essentially qualitative elements. They do not submit themselves to the treatment of the measuring rod and the chemical balance. The discovery of most of the important scientific theories on the very admission of the discoverers are due to a process that is unique and trans intellectual. The scientific picture of the world leaves out a great deal. Reality in actual experience contains intuitions of spirit, value and mystical ecstacy. Science does not possess intellectual instruments with which to deal with these aspects of Reality. The impenitent scientists declare that there is no point in life or no purpose at the heart of the universe. This declaration arises as a result of the partial grasp of Reality. The scientist abstracts a simplified private universe possessing such qualities that are quantitatively determinable. Hence the incomplete picture.

Besides the inadequate conception of man they have as a result of it, a distorted view of the prime object of man's life. They are all agreed in asserting that men desire pleasure (their own most often) and of other people sometimes. Such an assertion is hardly fair to men and the broad testimony of history does not warrant it. The human being is essentially a creature, on the border land, he has animal appetites and spiritual yearning. It is partial and defective realism to consider man as essential a mechanical product of several factors. The factors are enumerated sometimes in terms of natural laws after the manner of the impenitent scientists, and at other times in terms of sociological factors. The materialist interpretation of history, the central dogma of the communist, asserts that men are products of the environment. Morality of men are explained in terms of money power. The epithet 'dialectical' to the word Materialism does not in any way mitigate its allegiance to determinism.

To represent man as a product of forces is to deny him his autonomy and to ignore the imperishable spirit in him. It is too much to assert that man lives by bread alone. It is nothing short of a caricature to depict men as being determined by money power. "Xerxes had no lack of food or raiments or wives when he embarked upon the Athenian expedition. St. Francis and Ignatius Loyola had no need to found order to escape from want."

Constitutional arrangements and large scale social and economic reforms on psychological analysis prove to be failures unless the individuals are re-made. The large scale social reforms do not abolish evil at its source ; they deflect evil from one channel into another. If we are keen to establish ends, we must do something more positive than merely deflect of evil. Evil must be suppressed in the individual's will. That is why it is necessary to re-make men. "Constitutions" as Plato observed, "are not born out of rocks but out of the dispositions of men." What we need is the exacting task of the Re-making of man, and not exciting social experiments.

The humanists that take their refuge from the ills of life in the worlds of art and poetry can never find there rest. Man is a many levelled being and the intellectual and the aesthetic in him is not the ultimate. Intellect is just like other physical sense organs and is bound by law of decay. So it is the insufficiency of courage that makes us take to art and literature. In the words of a professor of literature poetry and art only reveal the antinomies of emotion, while religion transcends them. Poetry conserves values as well as the apparent individualities, and religion surrenders them at the feet of God. Art, poetry and music reveal in the rainbow colours of creation ; Religion seeks the white radiance of eternity. As an English mystic poet put it Poetry cannot save the soul but can make it worth saving. Poetry is the portal to religion.

The denominational religions can at best be used a means or step to the spiritual religion of Advaita. Śankara admits that man is essentially a many levelled being and the ultimate nature of man is bliss-knowledge and existence. On account of the presence and functioning of māyā man deludes himself into the belief that his interest is opposed to that of his neighbour. He believes that he is a body, and mind, a separatist element in the world of claims and counter-claims. This separatist feeling must go before the idea of a common humanity is realised. This realisation is essentially a unique experience.

It is the birth right of every individual. The derelect and the sinner are not lost to the spirit. Advaita equates intolerance with irreligion. The spiritual experience as pure spirit is not something that is derived from an alion source. Spiritual realisation is not something that is derivative. It is intrinsic. It is self manifest and does not rest on the acceptance of any authority. The Advaitin believes rightly that men who have this spiritual experience alone can have the necessary strength to create a new social order. It transforms the very dimensions of our life. It is this spiritual experience that enabled a Buddha, a Jesus and a Śankara to establish the kingdom of Heaven. Spiritual realisation is not a distant place of resort, but it is the realisation of the imperishable in man. The kingdom of Heaven commeth not by observation, but it is within us. That is why the gospel asked us to "seek ye first the kingdom of heaven and all the other things will be added unto you." Without this realisation we can never have the necessary conviction and strength to work for humanity. This experience makes us feel the truth of the statement that 'there can be no happiness for any of us, until it is one for all.'[1] The religion of Advaita does not make us to give up the religions in which we are born but asks us to vitalise the one in which we are. Advaita is not opposed to other regions but transcends them. It points out to men that the fate with which they are faced is not an external one, but is what is within him. It encourages men by assuring them that they are not unequipped for the battle of overcoming it. It is such a spiritual religion that can usher in the New Social Order. Dogmatic theologies of the West or East, and denomonational religions do not cut much ice nor satisfy the modern outlook. If we are to be saved from the chaos of despair, the semi-confronting creed of humanism, the escapism of art and literature, Advaita is the only sane religion left to us.

[1] Mahatma Gandhi.

SRI KUMARAKURUPARAR SWAMIGAL A CONTEMPORARY OF SAINT TULASIDAS

By S. R. VENKATAKRISHNAN, B.A.

SAINT KUMARAKURUPARAR, from Srivaikuntham, in South India, was the founder of the Kumāraswāmi Mutt at Benares. He lived there between the years 1658 and 1688, when he won the admiration of the Nawab of Benares and Emperor Aurangazeb who granted him land for the Mutt. He was a contemporary of Saint TULASIDAS.

2. The following table gives the probable dates of the two saints. The dates of reign of the emperors and other monarchs are also given.

Kumarakuruparar.	*1625-1688 (63 years)	*Tulasidas.*	1554-1680 (126 years)
His stay at Benares	1658-1688	According to *Kalyāna* version of the *Rāmāyana*, Gorakhpur	
Aurangazeb's reign	1658 1707	Akbar	(1642-1605)
Zeb-un-nisa, (Aurangazeb's daughter), a great writer	1639-1689	Ode to Todarmal*	1589
All India philosophical conference held at the instance of Zeb-un-nisa as instructed by her Guru Sha Rustum Kasi	1660	Jahangir	1605-1627
		Shajahan	1628-1658
		Aurangazeb	1658-1707
Tirumal Naick's reign at Madura, (a patron of Literature and arts etc.	1623-1659		

*According to Stanley Lane-Poole's *Mediaeval India* but according to *Kalyāna* the date of Todarmal's death is 1669.

*Publication No. 27, of 1937 Dharmapura Mutt

The early life of both saints is shrouded in mysterious happenings (many of them are authenticated and true) as may be seen from the following:

Kumarakuruparar.

1. Dumb for five years and sang songs in his fifth year.
2. Sang songs in the presence of Tirumal naik when Goddess Meenakshi appeared in the form of a child.
3. Sang ten songs at Benares† on Gooddess Saraswati in order to learn the Hindustani language.
4. Discovery of Kedareaswara.
5. A lion was used for riding when he met the Emperor.

Tulasidas.

1. Visit to his wife's home and getting up a stair with a rope (Snake).
2. Blessing a murderer who was enabled to make a bull (Nandi) eat food out of his hand.
3. A grateful ghost that made him love Hanuman who introduced him to Sri Rama and Lakshmana.
4. A dead man recovered life.
5. Rescue from prison by Hanuman.

† A treatise about Benares in verses.

Saint Kumarakuruparar of Kumaraswami Mutt (1625-1688) and his Work at Benares

Kumaraswami Mutt was founded by the Saint at Kedar Ghat, Benares, when he was residing there between the years 1658 to 1688. The work of the Saint at Benares, as seen from the temple of Kedareswara Mutt, a Lecture Theatre, and Literature about Benares—reveals the influence of Tamil culture that spread to the banks of the Ganges in the seventeenth century. This era is *really* the Augustan age of Tamil Literature and Philosophy. It was also a brilliant epoch in Indian history and philosophy. The Saint was a disciple of Sri La Sri Masilamani Desikar, the fourth Sannidhanam of the Dharmapuram mutt and an oil painting seen in the mutt at Benares at present shows the Saint and other devotees from the South receiving their benediction from the Guru. A study of the life and work of the Saint throws some light on the religious revival of that period.

2. *Early life and work* (*1625-1657*). The saint's parents who lived in Srivaikunṭham were learned and were also religious minded. The child was dumb for five years from his birth and then he talked. When he talked, he 'lisped in numbers for the numbers came.' It is said of his work about the Goddess of Madura (Meenatchiammai Pillai Tamil) that it was read in the 1000 pillared mandap in the presence of Tirumalai Naicker (1623-1659) and that the Goddess Meenatchi was moved and was present as a child, and, to the wonder of all, disappeared at the end of the discourse. After spending some years in pilgrimage in South India, the Saint left for Benares in 1658 at the command of his Guru to acquire further knowledge of religion and philosophy.

3. *Later work* (*1658-1688*). It is during his stay at Benares that he interviewed the Nawab there. It is stated that, before meeting the Nawab, he acquired knowledge of Hindustani through his devotion to Goddess Saraswati about whom he has sung a poem (Sagala Kala Valli Malai). It is also said that he went riding on a lion to meet the Nawab (a painting of this may be seen in the Kumaraswami Mutt,) and then got grants of land which form the present site of the Mutt. The poem contains his invocation in ten stanzas of Kattalaikalithurai Metre. In the tenth stanza the invocation suggests his wish to an emperor (It refers to the then emperor Aurangazeb). It is during his stay at Benares that he wrote Kāsī Kalambakam—a treatise about Benares which shows the greatness of the author in literary composition of a very

high order. In 1600 a philosophical conference was held at Delhi, at the instance of Zebunnissa, daughter of Aurangazeb and a pupil of the religious head Sharustam Kasi, which the saint attended.

4. *Kāsī Kalambakam.* It is a poem of 100 stanzas. In his references to Benares, the saint mentions that God Viswanātha chants Pranavamantra in the ears of those that die there and then they are admitted in heaven. There is also a reference to God Bhairava and it is stated that sinful persons that die there are punished by that deity but not by Yama. Kalambakam is a garland of verses having eighteen different characteristics, such as the bird, parrot, cloud (megha-sandesa) or messenger, etc., in 'andadithodai' in which the last syllable or word or letter of a previous stanza forms the first one of the succeeding stanza. Also the last syllable or foot or letter of the last stanza is identical with the first one of the first stanza. It contains information about the presiding deity of Benares together with the other Gods enshrined there. The Saint has sung in a similar manner about the Gods in Madura in another Kalambakam.

5. *Lecture Hall at Kumaraswami Mutt.* There is a hall at the mutt where the Saint read Purāṇas of which one was the *Tamil Rāmāyaṇa* and the discourses were in both Tamil and Hindustani. The hall is finely constructed in the first floor and is approached from the ground floor by means of stairs on one side of a shrine. This shrine was used by the Saint himself in which the Sivalinga used by him is worshipped daily even now. The Saint had also good knowledge of Sanskrit.

6. *Temple of Kedareswarar at Kedar Ghat, Benares.* The origin of the temple is said to be due to the exertions of the Saint who discovered the Sivalinga in the land granted by the emperor Aurangazeb. References to the God Kedareswarar and to Kasi are in the traditional Tamilian poetic convention and practice. The Tamilian system of marriage is preceded by a period of courtship called 'Kalavu.' For instance, in the *Tamil Rāmāyaṇa*, Kambar has introduced this aspect of love with reference to Sri Rāma's marriage. While Sage Viswamitra was leading the two youths Rāma and Lakshmana in the streets of Mithilā, the poet makes Rāma and Sītā look at each other and love mutually. Rāma breaks the bow of Śiva (Śivadhanus) and gets himself united in happy wedlock with Sītā. This convention is found in an exalted form in which the poet "Thalaivi" addresses God as master (Thalaivan) while *he* himself is in the position of woman Bhakta (Thalaivi) trying to attain

her heart's desire. Saint Kumarakuruparar had depicted this aspect in various places, and various other aspects of Tamilian life, manners and customs are also found in his songs.

7. *Mutt at Kedar Ghat.* The Mutt as founded by the Saint which houses the shrine that contains the Śivalinga worshipped by him was enlarged in recent years and is in two palatial buildings. The picture of the Saint riding a lion that he used to interview the Nawab of Benares is also offered worship daily. More than a hundred persons are fed daily during the day.

8. *The Saints' Literary works and references to Kasi from other poets.* The Saint refers to the Ganges, in *Kāśī Kalambakam,* as thousand-mouthed, divine, gifted, Bhāgīrathī and Mātanginī. He refers to Triveni Sangam, where he had his bath at times, in his own inimitable way in four different places in the poem. Other references to Benares may be found in Skandam (Mārkandeya and Gaja Muga Padalams) Kāśīkhanḍa of Adivirarama Pandya (a treatise in 2525 verses) and Thiruvilayaḍal purāṇa (Indra Sapa Padala). A mutt at Chidambaram where our Saint lived before proceeding to Benares is called 'Kasimutt' and the street 'Kasimutt street'. Those that had stayed at Benares for some time and then returned to the south call themselves 'Kāśivāsī.'

9. *Saint Tulasidas.* From the table of dates given about the saints, it may be seen that Saint Kumarakuruparar was a contemporary of Saint Tulasidas. Their influence between each other could have been mutual as is generally supposed. Both of them lived at a period of religious revival in India and their influence is felt throughout India and in the Tamilnad. I would exhort my friends in Benares to make an exhaustive study of the South Indian Saint-poet who lived in their midst 250 years ago and who built a mutt there that is still a living monument to his great work.

My thanks are due to Mr. S. Chandrasekharan Pillai who supplied me literature about the dates of Saint Kumarakuruparar and his activities, to the authorities of the Kumaraswami Mutt who arranged for my stay there during my visit to Benares in January last, to Mr. S. Kalyanasundaram Iyer of Madras, and to Mr. S. N. Subramania Iyer of Coimbatore for their help in the preparation of the paper.

REVIEWS

Assamese Literature—by Birinchi Kumar BARUA, being No. 1 of the P.E.N. books on Indian Literatures, under the General Editorship of Srimati Sophia WADIA. Crown octovo, pages 4 + iv + 104, bound in yellow khadi. Rs. 1/8 (International Book House, Ltd., Ash Lane, Fort; Bombay, 1941)

The P.E.N. (India Centre) plan of a series of brochures on major Indian literatures consists primarily of the following subjects, shewn and proposed to be published in alphabetic order: Assamese, Bengali, Gujarati, Hindi, Kannada, Malayalam, Marathi, Oriya, Tamil, Telugu and Urdu; in between Hindi and Kannada there is an additional item as Indo-Anglian literature. The scheme is no doubt a commendable one.

Already the first publication, *Assamese Literature* by Birinchi Kumar BARUA, has appeared in a pretty little volume of a mine of information presented in a lucid style. If those that are going to follow will be only equally good there is no doubt the series will not only make the literary trend and treasure of each language familiar to other sister languages and literatures but also will serve as a step to a proper understanding of the fundamental unity of culture in the country as a whole.

Srimati Sophia WADIA as General Editor has in her Foreword laid out the general plan of three parts to a volume—*first* a short history of the literature dealt with, *second* Modern developments and *last* an anthology. In the short compass of 55 pages the author of the first volume has rapidly surveyed in the first part the history of the Assamese literature from the beginning in the 13th century to the end of the 18th, wherein he describes among others the period of translation from Sàmskrit and the Vaishnavite period and after; in the second part is given the story of modern developments, and in the last an anthology of standard literature is presented in 42 pages. The printing and get up is good. A two-page map of India at both ends, attached to the covers, with the area of the Assamese language in colour, is a special feature. The maps in other volumes will no doubt show the respective regional areas similarly particularized—a splendid editorial achievement!

The list hitherto taken up for the series does not show some of the other important languages, such as Maithili and Panjabi for instance. We understand however that Panjabi is included in the project although it could not be enlisted before owing to the uncertainty as to the author to take up the work.

The present reviewer has now an authoritative information that Raja Sir Daljit Singh has definitely consented to make himself responsible for the brochure on Panjabi literature. Maithili too is no less important and it is hoped a responsible author should take up the work, and the PEN should not fail to include in its scheme a small volume on the beautiful Maithili language in which the immortal poet Vidyāpati wrote his pretty poems and composed the sonorous songs which are still to-day sung by village women in Mithila and parts of Bengal. Maithili has a classical literature of its own as the numerous manuscripts reported by the Bihar & Orissa Research Society would tell. The language and its script are most akin to Bengali and many a Bengali litterateur would claim Vidyāpati as belonging to Bengal! Poet Rabindranath TAGORE followed in his footsteps in respect of *Bhānu Simher Padāvali*, and in some of his later poems.

Some other languages, such as Sindhi and Kashmiri, should also find place in the list of P E N books, but the claim of Maithili is perhaps greater than many others.

The first volume, *Assamese Literature*, is very appropriately dedicated by its author to the modern educationist, Dr. Syama Prasad MOOKERJEE, during whose Vice-Chancellorship the Calcutta University gave that language an honour which, although overdue, was perhaps never done before. It may be recalled in this connection that that Doctor's still distinguished father, the late Sir Asutosh MOOKERJEE, was probably the first man in the present age to have raised the status of Indian languages in general and Maithili and Assamese in particular, by introducing into the University curriculum higher study and research in the domain of literature written in those languages.

The present reviewer ventures to suggest that in addition to the several volumes under the scheme there should be an introductory volume too of a general character, touching upon all important literatures of the country, and showing a classification of the families of the various languages and their interrelation with one another. Such a volume need not necessarily be issued first, although it is better to be so. It would be best if the General Editor, with or without a joint-author, would take up that work too upon her shoulders. Such hope is based on the fact that her energies and capacities seem to be rather indefatigable, from the way she has been editing that high-class monthly, *The Aryan Path*, in addition to her labour of love for the P.E.N., both as editor of its monthly journal as also as general organiser and sponsor, besides other preoccupations.

In respect of the transliteration from Sanskrit, Arabic and modern Indian languages the adoption of a standard system that is followed by learned societies, such as R.A.S.B., B.B.R.A.S, etc., would however enhance the value of the series in general. The General Editor's plan of following the respective authors in this matter seems to be rather unnecessary, if not incongruous, except for the particular style and spelling an individual author adopts with regard to his personal name and surname.

S.C.G-T.

• *Home and Village Doctor*—by Satish Chandra DASGUPTA. Crown octavo, total 1441 pages, illustrated ; cloth Rs. 5 (Khadi-Pratisthan, 15 College Square, Calcutta. To be had at Indiana Library Burean, Gandhigram, Benares.)

The volume is primarily written in simple non-technical language for the layman and is of great practical utility. This book is the result of Mr. Satish Chandra DAS GUPTA's long years of labour, the ripe fruit of deep studies and the sum total of all of his vast experience. The author has been successful in presenting the cause, symptology, pathology and prognosis of every disease in a very lucid manner. The value of the book has been enormously enhanced by an extensive index. The index is so skilfully arranged that it definitely leads to the remedy in the minimum of time with the maximum of accuracy. After any lay prescriber has once mastered the index of this book, he will find it of real value in his every day practice. The ingredients of every prescription are so cheap and easily available in any village that the book is really a boon to poor people who live in villages and are unable to have the services of a skilled physician. The cost of medicine for each prescription is hardly two pice. The book contains a great deal that you do not find in other books. It is beautifully bound and well printed.

S. G. MUKERJEE

• *A Practical Course of Précis Writing*—by L. M. PALSER, M.A. (Books I, II & III ; University of London Press Ltd.)

In our present era of hurry with our feverish need for economising time and space there is a growing demand for proper précis writing; the businessman, the administrator, the statesman, the editor all need proper précis of matters that interest them. The voluminous reports of committees, conferences, commissions require a properly prepared précis for public consumption ; the speeches and proceedings of meetings require précis for the newspapers ; the businessman requires

précis of a series of transactions. Hence in modern time précis writing has developed a greater commercial value than before but it has also a considerable educational value which is realised by educationists. It is an aid to mental development. An ability to produce a good précis implies the power of judgement, a good command over words and the power to write concisely. A good précis in English is neither telegraphese nor that modern monstrosity Basic English but it is correct English tersely giving the gist of any piece of printed, written or spoken matter.

There are many books on précis writing in the Market. *A Practical Course of Précis Writing* in three books offers a graduated course of instructions, consisting of passages of various types actually worked out in detail and a varied and classified selections of examples for practice. In the preparation of these three books Mr. Palser has drawn upon his long experience as a teacher of English. The first book will be of considerable use to students in the intermediate classes in Indian Universities; it offers valuable hints and many useful models and exercises. The author has supplied a very valuable index to exercises. The second book is a more advanced course in précis writing containing examples and exercises of different forms of prose and verse passages. The third book is intended for candidates appearing at the Civil Service examinations in England and gives passages for exercise in précis writing which are often lengthy. The book gives some worked examples and offers 80 passages for exercise classified as narrative, description, explanation, argument. These three books on précis writing taken together will be found of considerable use by teachers and students ; they offer useful and abundant material for class work.

M. M. DESAI

Benares Hindu University Silver Jubilee, 1916-1942. Royal quarto 86 pages ; Rs. 3 (B. H. U. Old Students' Association, Benares, 1942)

This is a hightly illustrated and interesting brochure giving all information regarding the University from its very conception. Foreworded by Sir S. RADHAKRISHNAN, the present Vice-Chancellor, and prefaced by Pandit Gauri Nandan UPADHYAYA, the President of the B. H. U. Old Students' Association, the brochure is a great credit to the Association that published it on the occasion of the Silver Jubilee celebrations, on the Vasanta Panchami day, January 21, 1942. One who desires to know about the University has only to pour into the pages of this interesting publication. Even on looking

through the illustrations one can form an idea of the Benares Hindu University. The illustrations give pictures of persons and institutions, buildings of Colleges, Hostels and Halls, Hospital, Playgrounds, Amphitheatre for huge gatherings, Botanical Gardens and other areas, views of certain classes, laboratories, and machineries, and what not. A vivid idea is formed of the inner working of the technical courses, so graphically presented in the brochure. In a nut-shell the publication gives all important information for a visitor or newcomer and the brochure will be valued equally by present and past students; others interested in education will also value a copy no less than students. As a connected short history of the B H. U. for the busy man the publication will be valued for all time.

Some graphic illustrations, explaining some important figures, have immensely enhanced the value of the publication. A look into the map of India (p. 73) will convince one of the all-India (or even international) character of the University. It shows the number of students in the last session (1941-42), hailing from the various Provinces and States as also neighbourring countries.

The printing, paper, illustrations and get-up are all very good. It seems however that in the hurry in which the publication had to be got ready a few typographical mistakes have crept into the brochure. One cannot excuse the printer for a typographical error in the very name of our dear Pro-Vice-Chancellor (p. 8). One important omission that the present reviewer can point out is that of the name of the late Miss Lilian EDGER, M.A., as Honorary Principal of the Central Hindu Girls' School for several years, during the first stage of the School, just after the first Principal Miss ARUNDALE (p. 20). Miss EDGER was also Honorary Editor of the *C.H.C. Magazine* monthly for several years. In spite of some of these minor defects the brochure is a splendid work and much of the credit must go to the indefatigable Honorary Secretary (Mr. G. B. PANT) of the Association.

G—T.

*Rammohun Roy and America**—by Adrienne MOORE, pp. 190. It is most heavily documented work on Rammohun's influence on American thought in the mid-nineteenth century. The author has brought out an astonishing amount of authentic materials on the subject. To Miss MOORE belongs the credit of

*Published by Satis Chandra Chakravorti at the instance of the Sadharan Brahmo Samaj, Calcutta, 1942. Price: cloth Rs. 2/8, paper 2/-.

having laid the first furrow in a field of which practically nothing was known till now and as such it will be invaluable to all those who will seek to study this particular field of which hitherto most people were unaware. At a time when India is really beginning to count in world politics, the contribution of India to one of the most original aspect of American mind will, it is hoped, amply convince all those who are not prejudiced against India that the traditional Indian thought is still vital and inspiring. Miss Moore's finding that American Transcendentalism which was born of the "dual impact of Romanticism from England and more specially from Germany was stirred unwittingly and imperceptibly by Rammohun Roy" will not be easily challenged. The extensive bibliograpghy on Rammohun unearthed from American libraries has yet another significance. Many people have heard of America as a land of multimillionaires but there is another kind of wealth also in America and of which few have any information, *viz.*, her libraries the exploration of which might yet lead to a better and a more human understanding between the warring peoples of the world.

U. C. N.

East and West—by Rene GUENON (Luzac & Co.) pp. 257 1941 : translated from the French by William MASSEY ; price 3*s*.

The author is well known. He is one of the most significant of living European authors who have been distressed into thinking furiously about the conflicts of the modern world and specially that between the East and the West. The jingomaniacs of the last century saw more of the surface differences and concluded that one was the antithesis of the other. M. GUENON points out that the difference is not fundamental and does not emerge till after the thirteenth century when Europe departed from the universal metaphysical tradition which constitutes the really valid foundation for any civilisation deserving to be so called. The book falls into two parts. In the first part the author analyses the various western illusions as he calls them much along the same lines as TAGORE has done between civilisation and progress and seeks to destroy some of the *idola fori* of the modern European world. In the second part he suggests how this growing antagonism can be healed and the widening gulf bridged not by fusion of the two but by mutual understanding between them. What the author emphasises all along is not the truth of facts so much as the truth of ideas, for he believes not facts but ideas—those of the right kind based on metaphysical truths derived by concentrated intellectual efforts—can alone save the world. And in this the

East has much to teach, for the East has kept in its fullness true intellectuality which is as different from western rationalism as chalk is from cheese. Europe and Asia, the author suggests, can only meet in complete accord upon the common ground of the metaphysical and purely intellectual tradition, upon the basis of what may be called the greatest common denominator of all mankind. The book well repays study.

U.C.N.

The Sociology of Races, Cultures and Human Progress: Studies in the Relations between Asia and Eur-America—by Dr. Benoy Kumar SARKAR, M.A. Super-royal octavo, x + 400 pages, ½ cloth, Rs. 7 (Chuckervertty, Chatterjee & Co. Ltd., Calcutta, 1939)

Dr. SARKAR is a forceful thinker and has to his credit voluminous literature which he has been creating ever since 1906. Even at his present advanced age his energies seem to have known no ebb tide. He has arrested the attention of the thinking world by originality of thought and presentation. There is already a Sarkar school of thought in Vaṅgīya Dhana-vijñāna-Parishat (Bengal Academy of Sociology) where a number of distinguished scholars are engaged in sociological research. Works by Dr. SARKAR are supplemented by a considerable quantity of literature about himself. The most comprehensive of the latter is *The Social and Economic Ideas of Benoy Sarkar* by Prof. Banesvar DASS and fourteen others. That is a volume of nearly 700 pages of large royal octavo. *Sarkarism* by S. K. GHOSHAL is a handbook giving the 'ideas and ideals of Benoy Sarkar on man and his conquests.' *Conflicting Tendencies in Indian Economic Thought*, otherwise known as *Sarkarism in Economics* by S. C. DUTT is a big volume of 934 pages, while *Pragmatism and Pioneering in Benoy Sarkar's Sociology and Economics* by N. N. CHAUDHURY is also a decent volume of 152 pages. Turning over the pages of any of these works or a single volume of his own writing in English or Bengali a reader is certain to form an idea of the high quality of these works.

The present volume, *The Sociology of Races, Cultures and Human Progress*, is a typical publication giving in a nut-shell the various ideas and activities of the author and his school of thought. In an earlier edition it was known as *The Futurism of Young Asia*, which is the title of the introductory essay in the volume under review. The Preface, written in Berlin, October 1922, gives in a short compass the subject matter dealt with. Other monographs included in the volume are entitled, 'Asia and Eur-America', 'Revolutions in China', 'Tendencies in

Hindu Culture' and 'Young India (1905-1921)'. Begin with any of the essays, and you will be tempted to go through the others, and certainly gain sufficient food for thought to mould your own ideas. Written over twenty years ago the book retains a lively interest hardly found in modern publications.

One outstanding fact that is presented in a convincing manner throughout is that the species man is man, whether of this colour or that, of one region or another, of the present age or of a remote one. There is no fundamental defects in any people to keep them crippled for all time, provided proper opportunities are available for training and culture. There is a great affinity between one man and another, which will sooner or later be recognized unless the whole species is to run the risk of extinction. The author has not suggested these cut and dried conclusions, but have only presented the case in an admirable way to help the reader to draw his own conclusions. Kākuzo OKĀKURA, forty years ago, began with the theme 'Asia is one' in his *Ideals of the East*. The suggested conclusion of Prof. SARKAR seems to be one step farther. While maintaining that Asia and Africa have been wronged by Eur-America in innumerable ways for about hundred years and more, demanding formation of oneness in the wronged, he drives us to draw our conclusion that 'world is one' with the hope of mankind to see an established brotherhood of man.

"'Young Asia does not want sympathy or charity. The demand of Young Asia is justice—a justice that is to be interpreted by itself on the achievements of its own heroes." Thus declares the author. Again, he says rather emphatically :

"Only then, in the event of Asia recovering its natural rights from the temporary aggresors and illegitimate userpers, will sanity prevail in the deliberations of the great Peace-Council convened by the Parliament of Man. The futurists of Young Asia are looking forward to that spiritual re-birth of the world." (p. 22).

At another place the author says :

"The peculiar 'logic' with regard to the Orient, which has been engendered in the nineteenth century by the natural and pardonable vanity of success since the industrial revolution, has to be entirely changed. Eur-American mind must be trained to receive Oriental culture on the only terms which ensure the dignity of the Orientals as colleagues of the Occidentals in the past, and as collaborators with them in the future advancement of the human race. There is no greater

and more serious problem than this to which the science of education has to address itself at the present day. The maintenance of world's peace will depend ultimately upon the schoolmaster and University Professor." (p. 173). This view is held by us all today.

As to a call to cosmopolitanism Prof. SARKAR clearly puts :

"The New Asia wants the New Europe and New America to admit, as principle, that their peoples must not by any means command greater privilege in the Orient than the oriental peoples can possibly possess within the bounds of the Occident. In other words, Asians must by law be entitled to enjoy the same rights in Eur-America as Eur-Americans have been enjoying in Asia. This doctrine of international reciprocity is the first article of faith in the gospel of Young Asia. And it should not seem strange to Christendom, accustomed as it professes to be, to the "golden rule" enunciated by St. Luke." (p. 173-4).

Again, "Young Asia wants Eur-America to realize that democratic emotions and ideals are not the monopoly of the occidental race-psychology. Mohammadans learn from the *Koran* that 'the hand of God is with the multitude.' Chinese have their Rousseau in Mencius who declared that 'the most important element in the State is the people, next come the altars of the national gods, least in importance is the king.' And the Hindu mind nurtured on the tradition of the *Mahābhārata* is bent on active resistence to arbitrary rulers, not stopping short of the execution of the tyrant. It is well-known, besides, that during the age of Periclean Athens there were no nationalities in Europe more democratic than the Śākya Republic, the United States of the Vajjians and several other republican communities organized by the people of India." (p. 174)

The claims, advocated by the author, of equality and fraternity are neither pretentious nor absurd. The sole thesis is that Orientals have served mankind with the same idealism, the same energy, the same practical good sense, and the same strenuousness, as have the Greeks, Romans and Eur-Americans; that the Orientals have been as optimistic and active in promoting social well-being and advancing spiritual interests as have the other races ; that the Orientals have developed ideas, ideals and institutions which are analogues of the rest of humanity. Asian culture, again, is not all original creation of indigenous Oriental intellect, but to a great extent the result also of conscious adaptation or assimilation from extra-Asian sources, like other culture-systems of the world.

Again, the author says (p. 176) in short that the Orientals are men, their successes and failures are the successes and failures of human beings. They should therefore be judged by the same standard by which the tribulations, lapses, weaknesses, falterings and triumphs of Eur-American humanity are measured. That is, they are to be tried not by an impossible static standard of ideal conditions in a utopia, but by the dynamic historical standard which suits the conditions of the ever-varying, ever-struggling, ever-failing, ever-succeeding, part-brute, part-god animal called Man. The culture-anthropologist must be honest enough to say with Walt Whitman :—

> "In all people I see myself, none more and not one a barley-corn less,
> And the good or bad I say of myself I say of them."

The book will always be an inspiration to Young Asia and will be read with profit by Eur-Americans as well, for the position taken by the author is quite reasonable, and all will find it well worth a perusal even at the present moment, twenty years after it was first published.

It should also be admitted that Dr. Benoy SARKAR has enriched our literature in several ways. The series of terms he has introduced both into English and our own languages is so appropriate that we never like to discard any in the course of our everyday conversation and writing. 'Eur-America', for example, has been found by the present reviewer first in the writings of Benoy SARKAR. His originality in this matter can however be compared with that of another contemporary Indian thinker, the veteran socio-philosophic leader Dr. BHAGAVAN DAS of Benares. It will be a welcome idea to append to the major works of such authors a glossary of special terms culled or coined: Dr. SARKAR's school might issue a separate pamphlet to ease the working of various terminology committees now engaged in the country. As to the astounding merit of Dr. SARKAR's works in general, suffice will it be to say that *Sarkarism* has now become almost a common expression in the particular fields of his work. With the solitary exception of Mahatma GANDHI there is hardly any other living leaders of thought in India to whose name *-ism* has ever been applied. There are *-ites* and *-ists* no doubt, but *-ism* is only sparingly used. The admirable volume, entitled *The Social and Economic Ideas of Benoy Sarkar*, written jointly by as many as fifteen scholars of repute, is itself a tangible proof of the popularity of the ideas promulgated by the hero. Seldom do we find such a wide recognition of one's worth in one's own lifetime. Benoy SARKAR is one of the few in the world today who have achieved such eminence.

G—T.

FOUNDATION-STONE-LAYING OF THE SAMSKRIT COLLEGE

VICE-CHANCELLOR'S SPEECH

[Sir S. RADHAKRISHNAN, in laying the foundation stone of the Samskrit Mahāvidyālaya on February 25, 1942, spoke as follows.]

Ladies and Gentlemen: This function should have been performed by Pandit Madan Mohan MALAVIYAji, our venerable Rector. Unfortunately on account of his wife's illness it has not been possible for him to be present here this morning. You know how dear to his heart is the development of Samskrit Culture and Learning in this University. We all wish and pray that his wife may recover and relieve him of his anxiety.

In this University, the very first college that should have been built is this College for Samskrit studies. The Act declares that the distinctive features of the University which are not to be found in any other University, are the development of Samskrit culture and the imparting of instruction to all Hindus in Hindu religion and ethics. But on account of paucity of funds and other claims on our slender finances, the construction of this building has been postponed till this day. Thanks to the magnificent donation of a lakh of rupees by Seth Raja Baldeva Das BIRLA we are now in a position to take up this work. This University owes a great deal to the Birla family. They have donated to us nearly ten lakhs of rupees from the very foundation of the University up to this day. The interest in Hindu culture is a common possession of the Birla family. You all know that Seth Jugul Kishore BIRLA is really a Sadhu, who has devoted his life and energy to the propagation of Hindu *dharma* in this country and abroad. Seth G. D. BIRLA has been of great assistance to us in raising funds in recent times. I am glad to say that it is our good fortune that the members of the great Birla family have an interest in, and affection for this University.

It is stated that the development of Samskrit culture will not only lead this country to better ways but will help the world. We are living in a mad and monstrous world. History is being hammered out into new shapes by hard blows of death and defeat. Around us, we find so many signs of dissatisfaction, mal-adjustment, and moral decay, and we are attempting

to defend this civilisation, by warping our spirits and wasting our lives. What is all this due to? Why are we in this unfortunate condition. If I may offer an explanation, it is due to the poverty of spirit, leading to the unchastity of mind and abuse of human life. We are no doubt efficient, but efficiency seems to mean the degradation of man to the level of the machine. We are trained to do a number of ingenious tricks, but our spirits are low.

In the Chāndogya Upanishad, Nārada approaches Sanat Kumāra to teach him wisdom, the latter asked him to say what he has already learnt. He said: I have studied the Ṛgveda, the Yajurveda, and the Sāmaveda, the Atharvaveda as the fourth; Epics and the puranas as the fifth; the Veda of the Vedas (grammar), science of ancestral worship, mathematics, science of portents, science of time, logic, polity, etymology, subsidiary vedic treatises like phonetics; science of spirits, science of weapons, astronomy, science of snake charming, five arts, venerable Sir, I have studied all this; venerable Sir, I know verily the texts, not the Self.* I am in sorrow, may you lead me across to the other side of sorrow. To him Sanat Kumāra replies "all that you have studied are only names (*nāmaiva*)." He takes him step by step to the ultimate truth. *Yo vai bhūma tat sukham nālpe sukham asti.* What is great is bliss, there is no bliss in the small. *Bhumaiva sukham*, the great itself is bliss. The great itself is what is to be desired to be known. We are simply the learners of outer texts, (*mantravit*) and not the knowers of self (*ātmavit*). The teacher leads him step by step, tells him that he has learnt only words, but there is something deeper and beyond informing and inspiring these different outer forms of life, the spirit the *ātman*. To know, possess, and be the spirit in this physical frame to convert this obscure plodding mentality into clear spiritual illumination and build a life of peace and joy on the basis of our essential needs and satisfactions, to grow into the full stature of the spirit is the purpose and destiny of man. When we lay hold of the spirit in us, we can act in the world of life, and possess true perspective. Our powers become angelic and our apprehensions godlike. What the world aches for and this Samskrit Mahāvidyālaya can supply to a little extent is a wealth of spirit. *Sarveṣām eva danānām brahmadānam viśiṣyate.*

*Sa uvāca:—Ṛgvedam bhagavodhyemi, yajurvedam, sāmavedam, ātharvanam caturtham, itihasa-puranam pañcamam, vedānām vedam, pitryam, rāśim, daivam, nidhim, vakovākyam, ekāyanam, devavidyām, brahmavidyām, bhūtavidyām, kṣatravidyām, nakṣatravidyām, sarpa-deva-janaividyām, etat bhagavodhyemi, so'ham bhagavo mantravidevāsmi, nātmavit.

Ladies and gentlemen, while the truths of spirit are eternal in their value, they are elastic in their application. The outer forms require to be modified from time to time. Our culture has not been a static one, not a fixed deposit. But it has been a steady, growing tradition. We have moved on from the Vedas to the Upanisads, from the Upanisads to the Gītā, and from the Gītā to the *Acāryas*, and from them to the interpreters of the day. They all respect the truths of spirit, but re-orient them to suit their conditions.

We cannot stand still in a world which is moving so fast. It must be the aim of these Samskrit institutions to lay hold on the thoughts of spirit and re-adapt them, and re-orient them to the modern changing world. Our country is engaged in a struggle of self-affirmation against the forces that are challenging us. Our recent past has been unfortunate. And it is no use our attempting to revive it. A true renaissance is not a reproduction of our past or a revival of it. What is the past we can re-produce ? Is it the vedic age, or the epic or the puranic ? Or, are we to revive the 12 forms of son-ship, or the eight forms of marriage ? A true renaissance means a re-creation, a new birth. We must have a firm grip on the principles of the past and change our outer forms and institutions to suit modern conditions. We must be loyal, not to our recent past, which has been so unfortunate, but to our great past. Did not our schools and philosophers possess the mobility of the mind, the dynamism of the spirit to launch new schools of thought and extend their cultural sway over China and Japan, over Siam and Burma, over Bali and Java ? You find also that in their own days the *Acāryas* were regarded as heretics. What happens to *Śankara* in his own time ? You find that in the *Śankara Digvijaya* that he was dismissed as a heretic. But that same *Sankara* to-day is the champion of orthodox religion.

I do hope that the scholars turned out of our institutions which are to be housed in this Mahāvidyālaya will imbibe the spirit of the great past, and go forth to distant lands, proclaiming the message of India, the truths of spirit, the majesty of moral law, and the simplicity of life. I have great pleasure in laying the foundation-stone of this new building which is to house the colleges of Oriental Learning, the College of Theology, the Gītā Samiti, and the Samskrit department of the Central Hindu College.

A PLEA FOR AHIMSA IN HUMAN LIFE

By B. L. ATREYA, M. A., D. LITT.

ONE of the most important ethical teachings of Lord BUDDHA, as that of Lord MAHAVIRA, was *a-himsā*. It is the principal teaching of Mahatma GANDHI, the living teacher of India. Although not the principal one, it has always been one of the cardinal principles of the Sanātana Vaidic Dharma (the eternal Ethical Law of the Vedas), popularly known as Hinduism. It is a part of the Sermon on the Mount and Hazarat MOHAMED also is said to have taught it to his followers, although in a restricted sense. In short, all great religions and teachers of the world have exhorted man to practise *a-himsā*. It is a different matter how far man has followed them in actual life.

What is *a-himsā* ? It is a negative term in which negation has a sense of *prohibition*. It means desistance from *himsā*. *Himsā*, in Samskrit, from which the term comes, means 'desire to harm, injure or kill'. *A-himsā*, therefore, means 'freedom from or control of the desire to harm, injure or kill'. The moral exhortation of *ahimsā* is thus an urge to desist from the deep-rooted and prevalent tendency of man to harm, injure or kill his fellow-beings or his fellow-creatures. It is translated into English by Mahatma GANDHI as "non-violence", and in his hands it has acquired even a positive meaning of 'love'. The most popular meaning of the term, however, is "non-killing".

Several important and vital questions arise in connection with this teaching. Is not *himsā*, which we are enjoined to desist from, a natural and instinctive urge common to all men and animals ? If so, is it desirable to get rid of it ? For, it may have some useful purpose to serve, as all instincts do. Even if it is desirable to eradicate it from human life, is it possible to do so ? Is it in any way beneficial for man or the society to do so ? Why, finally, does religion enjoin *a-himsā* ? We shall try to answer some of these questions in a purely dispassionate and unbiased way.

Most of modern psychologists do hold that *himsā* (pugnacity, aggressiveness, rage or urge to destroy or kill) is a natural instinct common to both animal and man. It is beyond doubt an animal instinct. If we observe carefully the acts of children, we shall be convinced of its presence in

human beings also. Almost all children are selfish and cruel. They take delight in being cruel and often play the rôle of tyrants with great pleasure. Sadism is only a perverted and extreme form of this natural delight in violence. The well-known tyrants of history were those human beings who pursued their natural urge of himsā (violent aggression) to its extreme form without any check or limit upon it. Every one of us has a natural tendency to be an aggressive little tyrant some time or other in our life, rather often, to some one or other. Who has not seen mothers, fathers, teachers and even lovers unconsciously and impulsively playing the part of a tyrant to their daughters, sons, pupils and the loved ones at times? Sometimes, more often than imagined, the nearest relatives and the closest friends do the greatest possible harm and become thirsty for blood. Even the greatest men, well-known for their learning and culture, have sometimes been seen to have become actuated by himsā towards those who happened to or were imagined to stand between them and the objects of their strongest desires. Even the BUDDHA, the CHRIST and GANDHI could not escape the wrath of those who became jealous of their greatness. Himsā, therefore, appears to be a natural instinctive tendency of man as well as of animals, which is apt to be aroused to action at the slighest provocation. Wars, riots, murders and criminal assaults, with which the human life is specially tinged, are external expressions of this tendency.

If *himsā* is a natural urge in man, a dictate of nature, why should we try to overcome or get rid of it? By doing so, are we not going to do something un-natural, something against the dictates of Nature, which it may have planted in us for some useful purpose of our life or that of our race, as most of the instincts appear to have been done for. In the case of animals and primitive men, the impulse of himsā is no doubt a protective and preservative device both for the individual and for the species. Most of the animals, birds, insects and primitive races would have been extinct, had they followed the creed of non-violence. They would have nothing to live upon and would not be able to protect themselves from their attackers or invaders. Sri Ramakrishna Paramahamsa used to tell a story of a snake who suffered immensely on account of its acceptance of ahimsā as a way of life. Among men it is only those races and communities who are capable of exercising their instinct of himsā, who dominate and rule over others, whereas those who are incapable of doing so, for whatever reason—height of culture

or physical and mental weakness—are living as subject races or communities. The majority of the Hindus are followers of *ahimsā* since the times of Lord BUDDHA and Lord MAHAVIRA, and they are almost since then under the domination of foreigners. No other race or community, having such a high civilization and culture, has suffered foreign domination so long in the history of the world. Even in everyday life we see that those people suffer most at the hands of others who are followers of non-violence. They are easily deprived of their wealth, women and position by those who have no moral compunction in exercising their natural urge of himsā. Himsā, therefore, seems to be of great use in the struggle for existence and possession. If it is so, what is the justification of the exhortation of the great teachers of the world to desist from himsā ?

We cannot appreciate the teachings of the great sages unless we understand the nature of man rightly and completely, know how far he is different from animals, and note the different ways in which instincts function in the lives of men and animals. Man differs very much from animals, although he may have evolved out of them. In him there are many needs, capacities and aspirations which are quite unknown to animals. The life that he shares in common with animals is only a small part of man's life, which, to say the least, is characterised by personal, social, moral and spiritual considerations, sentiments and feelings, unknown perhaps to animals. The life of animals, on the other hand, is entirely governed by instincts, which are not under their control, but are under that of Nature directly. An animal is a slave to his instinctive urges. But there is a great difference in the ways in which instincts function in men and in animals. Although the animal is a slave to his instincts, the latter function in accordance with the strict and legitimate needs of the individual and the species. Otherwise they remain dormant. They are not pursued for the sake of 'mere pleasure' and ambition as in the case of man. An animal eats only when he is hungry ; mates only when it is the proper season for mating, and attacks or kills another animal only when he is hungry or when his life is in danger. Animal needs are only those which are essential for self-preservation or for preservation of the species. Nature herself regulates and controls animal-instincts. An animal is not responsible for his acts, for they are dictated by Nature. But in the case of man, it is quite different. Nature has transferred the control of instincts to man and has also left them

undefined and unlimited with regard to their range and force in his case. Man seems to have a larger number of instinctive urges than animals have. He can modify, correlate and control them. He can inhibit some and reinforce others; he can repress and sublimate them. He can change their objects and modes of gratification. He can postpone their satisfaction and, in a sense, annihilate them. In short, he has a complete potential mastery over them, which is not granted by Nature to animals. Again, animals rarely experience conflicts between two instinctive urges dragging in two different directions, which is very common to man. They never suffer from taboos, conflict of duties, or "higher considerations" etc. When hungry, an animal will eat anything, living or non-living, provided it suits his stomach. When a female animal is aroused by an urge to mate, she will not mind whether the male is her son, brother or father. When an animal is actuated by a strong impulse of himsā, the tender impulse of parental or protective kind will never come in his way. At such moments the mother kills and devours her own offspring without any consideration. But man, by virtue of his possessing higher capacities of memory, imagination, thought, reasoning, self-regard, moral conscience and religious faith, has to reflect and deliberate before he acts. Owing to these complications man's life is far from being merely instinctive. Even if he wishes, he cannot act merely in accordance with his natural urges. He has to look before, after and around. If there were no other restriction or consideration, personal, social, moral or religious, and if man were to live according to his natural cravings alone, then every man would be an emperor of the whole world, a deflowerer of every virgin, and a twenty-four-hour-devourer of all delicious foods, besides being immortal; for that is what he instinctively wants to be. But it is neither desirable nor possible in human society. So it follows that, in the case of man, although it is necessary in the case of animals, instinctive desires have not to be followed as such; they have to be brought under conscious control and moral guidance. It is an absurd logic to appeal to the facts of animal life for determining human conduct, for there is very little common between the animal and human life. It is, therefore, foolish to argue that because *himsā* is a usual characteristic of animal life and because it is an instinctive urge in man, it is right for men to pursue it. It may be desirable to eradicate this tendency from human life to evolve a better humanity. Man has already made many improvements over Nature; he can make many more, for Nature has bestowed upon him the great gift of Thought.

As pointed out above, man is not a mere bundle of instinctive urges, and his goal is not mere self-preservation and preservation of the race. Those who regard man as nothing more than that do great injustice to him. If it were merely so, the question, "To be or not to be" would never have troubled him. "What is right" ? "What ought I to do ?" would never have dawned upon his consciousness. He would never have consciously and willingly sacrificed his own life for the sake of some ideals. The fact seems to be that although he may have had his origin in animal life, as the theory of evolution holds, his ideal, his goal, or his destination seems to be very different; nobler and much higher than that of animals. His feet are no doubt on the earth, he being an earthly creature, yet his head and eyes are fixed towards heaven. His vision and aspirations are heavenly. The innermost desire of his is to lead a heavenly life and to convert this earth into a heaven. Physically he is related to his animal ancestors, but his aspirations are hitched to a distant heavenly star. He is a stage midway between the animal and the divine. By his own effort and acts he can lift himself to the latter or drag himself into the former. By our effort and acts we can also raise this earth to heaven or degrade it to hell. Which of the two will happen depends upon how we use the powers that Nature has given us.

The rational nature of man demands that he should think of the consequences, immediate as well as remote, of his actions before he performs them; that he should know beforehand how far they are conducive to his personal, social and spiritual security and welfare. His higher and more lasting interests should not be sacrificed at the altar of the momentary gratification of isolated impulses. Apart from being a social, moral and spiritual being, man is a personality, a psychological organization, whose health and integrity depends upon how successfully the various conflicting urges are synthesized and reconciled. To develop a healthy personality, we have to think of each of our desires or cravings with reference to other desires and cravings and to the personality as a whole. We cannot afford to act upon a momentary impulse and thus create conflict and dissociation in our life. Whereas it is correct to say that himsā is one of the dominant instinctive impulses of man, it is also no less true that man has also equally strong instinctive urges for sympathy, for love, for companionship, and for protection of the weak and the dependent. As has already been pointed out above, man, and not the animal, is subject to conflicts between two or more opposite kinds of urges, on account of his powers of memory, imagination and thought. He has often to choose

between himsā and sympathy, which cannot both be exercised at the same time with regard to the same object. Which one shall he choose? It is not difficult to decide that even from the point of view of one's own personal health and happiness, one should follow the path of love and sympathy rather than that of himsā. For he is more of a human being while walking along the former path than while going along the latter. Moreover, no man, community or race can be sure of being equally strong and powerful for all times to live successfully by *himsā*. In order, therefore, to be on the safer side and to safeguard against becoming a future object of wrath of a forthcoming stronger man, community or race, he or it should keep his or its violent tendency under control, and set a right and desirable example for the future behaviour of mankind. It is a truism that he who lives by sword perishes by sword. A cruel man, community or race is bound to be treated cruelly when he or it becomes weak in course of time and others come into power. That is why in ancient Aryan times certain rules of decent behaviour towards the weaker and the vanquished were prescribed. It is also true that cruel persons live a miserable life and die a miserable death. A tyrant lives a life of perpetual danger. Aggressive individuals and communities live in perpetual fear of other individuals and communities. The gains and victories of himsā, although quickly achieved, are short-lived and are maintained at heavy cost. From the purely selfish point of view even, therefore, the path of himsā is not secure and desirable.

Man is not, however, a purely selfish and lonely creature. He is social *par excellence*. He craves for companionship, fellowship and social approbation, as much as he craves for food and sexual union. He is related to the society as a branch to a tree; as a part of the body to the body. Plucked from the society he withers. The ultimate and real society of man is humanity as a whole. The limits of religion, race or colour are artificial limits, which always tend to disappear when man lives a truly human life. All these limits are baneful. Human society flourishes better on love, sympathy and co-operation than on acts of himsā which upset its balance. Acts of himsā are diseases of humanity. Cruel and selfish individuals or communities who trample over and crush the natural rights of others are like poisonous germs of diseases in the body. A healthy and happy social life demands that all its members should live with others amicably, and should help and protect each other. In fact in the ideal society, the stronger members should take great care of and should suffer for the poorer and

weaker ones, as in a family. A socially conscious man, even if he does not follow the principle of sacrifice for the weaker, should at least follow the twofold golden rule of conduct, namely, 'Do unto others as you wish them to do unto you' and 'Do not do unto others as you wish them not to do unto you.' For all social life is based on give and take. Nobody likes to be harmed, injured or killed by another. Why should he, therefore, think of harming, injuring or killing others? If some body does so, he violates the basic social principle. He is anti-social, and, therefore, a criminal, and must be treated as such by the society. Those who preach, propagate and organise himsā, in thought, word or deed, are no better than criminals, irrespective of the position they hold, and deserve to be prosecuted and put into jails. In this age, when science has brought humanity in closer contact than ever before, and when scientific discoveries and inventions have greatly increased the powers of man to do both good and evil, there is a great and imperative need to organise humanity on rational, just and equitable principles and to develop a keen social and humanitarian consciousness in every human child, so that the inhuman, barbarous and grossly violent activities of the stronger and more equipped communities and races, threatening the very destruction of humanity itself, may not recur again. It is a pity that the so called civilized races and communities of the world are yet extremely backward in developing humantarian and moral consciousness. They still believe in the inhuman law of violent struggle for supremacy and exploitation of the weaker races and communities, which is the mother of occasional and perpetual wars. There will be war in the world as long as there is any empire on the earth; as long as any community, race, or country exploits the resources of others; as long as every human child is not taught to think, feel, and act according to the belief that all humanity is like a family and all human beings are brothers and sisters. Humanity needs a new type of a world-state in which each individual and each country will have certain minimum natural rights which shall not be encroached upon and trampled over by others, in which every human being will have equal opportuinty and which will especially look to the interests of its weaker members. This is not an utopia. Unless and until such a world state, which should be the only sovereign state, exercising full control over all the smaller states if there remain any, comes into existence, in a real and effective sense, there will be no end to war and the earth will remain a hell as it is at present.

Personal integrity and social solidarity are not the only objects of human life. There is, in each heart, a moral demand,

a command of the conscience, a 'categorical imperative', as the great German philosopher Kant has called it, an insistent urge to do the right without any consideration of the consequences. The great ancient sage Vyāsa, the author of the *Mahābhārata*, has given a beautiful expression to this moral urge in these immortal words: "One ought not to deviate from the right path even if it involves the frustration of all worldly desires (*kāma*), leads to frightful consequences (*bhaya*), brings about poverty (*lobha*) and threatens the destruction of one's own life (*jīvita*)."[1] Bhartṛhari, a great Samskrit poet of later times similarly said, "A brave righteous man will never deviate from the right path, no matter whether the worldly wise people praise or depreciate him; no matter whether thereby he loses or gains wealth; no matter whether it involves immediate destruction or a long life."[2] These expressions indicate that the moral urge, the inner command to do the right is supreme in man's life. It is above all considerations, even that of life itself. It is a very mysterious urge, the meaning of which is as much hidden from the little consciousness of man as the meaning of instinctive urges in animal life is hidden from the consciousness of animals. If, as we understand it, Nature has planted instinctive urges in animals for the purpose of preservation of individuals and species, it may be that it has planted the moral urge in man with a view that he may live a higher and nobler life in which peace and good will rather than struggle and destruction prevail. For as a moral being, guided by moral conscience, man rises much above his animal ancestors and cousins. He becomes a denizen of a higher world, in which higher values are preferred to mere life and worldly gains; in which every human being is regarded as an end in himself and never a means for another, and in which truth, justice, honesty, fellowship and freedom are the intuitively accepted principles of action. The only gain for which a man aspires in this moral realm is the inner satisfaction that he has done his duty; and the punishment that he undergoes for not having done his duty is the painful remorse that he inevitably experiences after having failed in doing his duty. Both of them are mere mental states the worth of which cannot be measured in terms of worldly objects. This moral urge is not an exceptional quality of some men. It is a universal urge. Every human being wants to be moral and to do the right. The difficulty, however, lies in determining what is

[1] न जातु कामान्न भयान्न लोभाद्धर्मं त्यजेज्जीवितस्यापि हेतोः ।

[2] निन्दन्तु नीतिनिपुणा यदि वा स्तुवन्तु लक्ष्मीः समाविशतु गच्छतु वा यथेच्छम् ।
अद्यैव वा मरणमस्तु युगान्तरे वा न्याय्यात्पथः प्रविचलन्ति पदं न धीराः ॥

right. Great thinkers of all ages have given serious thought to this question and have not yet found a universally acceptable answer. The great Vyāsa has said that 'the principles of right conduct are concealed in a cave'[1]; that is, are not revealed to men. He is, however, convinced of one thing, to which he has given expression in all the 18 *Purānas* composed by him, he says, that 'to do good' to another (*paropakāra*) is 'virtuous' and 'to cause suffering' to another is 'sinful'.[2] In other words, according to the great seer and teacher, Vyāsa, *himsā* is sin, and service is virtue. *Ahimsā* is among the cardinal virtues according to the *Code of Manu*[3] and the *Bhagavadgītā*[4] both. I do not know of any ethical thinker who has justified himsā as a general moral principle like truth, justice, honesty, kindness, etc. Manu enjoins *himsā* in those exceptional cases in which without our taking recourse to it a criminally minded anti-social person (*ātatāyī*) might have done much greater himsā to quite innocent persons.[5] It is in no way indulging in himsā for selfish gains, but doing a little and necessary evil in order to save human society from a much greater evil. Srikrishna also advised Arjuna to fight for establishment of righteousness and purely from the consideration of duty against those selfish and unrighteous exploiters of the world who had become a scourge to humanity.[6] In this connection we should not forget that before advising Arjuna to fight for righteousness Krishna had tried all possible peaceful methods of getting the minimum justice done. Another point that we have to remember here is that Krishna does not advise every man to fight and to fight for a selfish cause. It is only the unselfish Kshatriya, the righteous soldier of humanity, as such, who can fight with the only purpose of maintaining peace and order in the world. The present day wars, fought for exploitation, *aggrandisement* and imperialistic ambitions on both sides can never be morally justified according to the *Bhagavadgītā* or the *Manusmṛti*. Himsā can be virtuous in limited and rare cases only when it serves the cause of *a-himsā* itself. It can never be a universal moral principle. In a world-order and world-government based on ethical principles of truth, justice, honesty, equality, fellow-feeling, etc., which is the only form of government man needs

[1] धर्मस्य तत्त्वं निहितं गुहायाम् ।

[2] अष्टादशपुराणेषु व्यासस्य वचनद्वयम् । परोपकारः पुण्याय पापाय परपीडनम् ॥

[3] *Manusmṛti*, VII. 92

[4] *Bhagavadgitā*, XVI. 2

[5] *Manusmṛti*, VIII. 349-351

[6] *Bhagavadgita*, II. 31-33

in place of the present-day governments, which are more or less organized forms of exploitation, there will be little need of taking recourse to himsā. In such a government, most of the present-day leaders and dictators of various communities and countries, who create discord and hatred between man and man for their own selfish ends of power and plenty, will be regarded as criminals and treated as such. Moral life alone, whether individual or social, is happy. The present miserable state of humanity indicates that it is not living according to moral principles. No principle can be moral which cannot be accepted by all human beings. Himsā cannot be universalised and universally approved. Hence it can never be a moral principle. Even those who believe in himsā and act on their belief will not accept it as a right attitude if others stronger and more cruel than themselves were to have it towards them. Ahimsā on the other hand is morally approved universally. Our moral nature revolts against violence. Even meat-eaters would not like to kill or see the animals they eat being killed.

A question may arise here: If himsā is repulsive to our moral consciousness, how is it that we are actuated by it at times; how is it that in spite of our wish to desist from himsā, we are often moved by himsā in our actual life? The answer is that our moral consciousness gives us a vision of not what man actually is but of what he *ought to be*. The difference between the two is that between the *factual* and the *ideal*. If man were already moral there would have been no meaning in the urge to be moral. Man has to be moral. Becoming moral means *realizing the ideal*, transforming the factual into the ideal. This evidently requires an effort on the part of man. Moral life is not a natural life of instinctive urges and their satisfaction. It is, on the other hand, a life of constant vigilence, effort and struggle against the natural lower passions. It is a creative life and needs much of chiselling, moulding, prunning and weeding. The difference between a natural and moral life is that between a river and a canal, between a forest and a garden, between a rock and a statue, and between a lump of gold and an ornament. Moral life is a cultivated life; it is something achieved by the individual under the guidance of moral consciousness. Ahimsā, therefore, has to be learnt, as all other good habits have to be learnt. When acquired as a habit, it becomes, like all habits, a second nature of man. What a nice and habitable world it would be if most of us could make ahimsā a second nature with us.

There is a still deeper layer of our being than moral consciousness, which is unfortunately not yet open to most of us

in the same way as many people are not strongly actuated by the moral urge. And that is the region of religious faith, of spiritual intuition, or of a sense of something beyond and above our finite existence. Those who are fortunate to have access to this mysterious innermost chamber of their being, the cave of their heart, the core of their life, the very centre of their existence, and those who by their aspiration and effort have been able to extend their normal consciousness to that level of their being, are religious in the real and true sense of the term. Once we have a dip into that mysterious ocean of Divinity, on the surface of which we all live without our knowledge of the fact, we are changed men. We begin to see life in its fuller significance, in its wider relations, and with its much greater possibilities. Then we find that all our values are false values, and that we are ignorant of what we and the world in reality are. It is only then that we begin to understand the meaning and purpose of the moral categorical imperative. From that depth within us we emerge with a firm and unshakable faith that there is a Divinity guiding and controlling the world-process, although every individual is immortal and free to shape his own destiny; that our lives are governed by an absolutely just Law of Karma; that the death of the physical body is not the end of the individual soul, which repeatedly incarnates until it becomes perfect; that ultimately all plurality of things and individuals is rooted in the Divine Unity, the life and being of which we all can share by transcending our selfish individualities. Then only we begin to understand that *service*, *surrender* and *sacrifice* really lead to immortality, perfection and eternal happiness and that *himsā*, *exploitation* and *selfishness* lead to repeated death, ignorance and misery. Then we begin to understand that every selfish act, every cruel deed, and every effort to exploit others is a step in the direction opposite to spiritual perfection which is the real goal of our life. One who injures, harms or kills another for his own benefit or for the benefit of his own community or country really harms, injures or kills himself, his community or country from the spiritual point of view. Hence all religious teachers, who had a right vision of life and all scriptures based on that vision have denounced himsā and advised the cultivation of *a-himsā*. Those who think that *a-himsā* is preached by Mahatma Gandhi as a mere political method of winning India's freedom because Indians are not capable of sufficiently effective violence are certainly wrong. They do not understand him. Mahatma Gandhi is a great "seer" and his teachings are strictly in accordance with his spiritual "vision."

A very vital question, which is in fact the very crux of the problem, arises here. Can ahimsā be an effective method of defence against the violent force of an aggressor? How, in other words, a man or a community sworn to ahimsā, is to defend himself or itself against a violent aggressor without taking recourse to himsā? This question is very difficult to answer and no ethical thinker has answered it more satisfactorily than Mahatma GANDHI. He has formulated a technique of non-violent self-defence against a violent aggressor which was not known to earlier thinkers. They either advised the victim to take to himsā in self-defence or to invoke the help of God in case the victim was too weak to offer violent defence. Some of them advised the victim to surrender with faith in the law of *karma* according to which the aggressor was bound to suffer inevitably in course of time for his misdeeds. According to Christ, we should not even resist evil; we should love our enemy and pray to God for his pardon. According to his teachings, if somebody gives you a slap on the right cheek, you should offer him the left also, and if somebody takes away your coat, let him have your cloak too. This advice may be quite right from the spiritual point of view, but it cannot be practically followed by men of the world and by races or communities which suffer under the thraldom of other violent and aggressive ones. Even the devout followers of Christ do not follow his teachings in their daily life. Hindus who have been believing in the law of *karma* and in the Divine help along with their belief in ahimsā have suffered most in the history of the world, as has already been pointed out. Thanks to the practical experiments and philosophy of Mahatma GANDHI, we now have a very effective method of non-violent defence against violent aggression. It consists in *Resistance* and *Non-co-operation*, both of which should be strictly non-violent. Every individual, community or race should try to protect his or its natural and minimum rights and should never surrender them to a violent aggressor. These rights should be defended bravely and at the risk of life. Death should be preferred to yielding, but no recourse should be taken to violence against the aggressor. On the other hand, the victim should give expression to the noblest side of himself in relation to the aggressor, so that the nobler but dormant nature of the aggressor may be aroused into action. There is nothing more contagious than nobleness and nothing more effective against an enemy than a sincere love for him. For, himsā, like all other emotions is, governed by what is called by psychologists the "law of swing." The greater the swing of a pendulum on one side the greater it is bound to be on the other if there is an opportunity for the pen-

dulum to cross the central point. The most ferocious person is likely to become the kindest, in case his other side is slightly aroused. The victim of an aggressor should avoid feeding his anger by not returning violence with violence, but on the other hand, should try to arouse his finer and nobler instincts by himself behaving in an extremely noble and rational way. Thus there are greater chances of the aggressor's feeling smaller in the presence of the victim than in a violent struggle on both sides. The victory or defence of violence is shortlived, but that won by love and reasonableness is permanent. Even if a non-violent victim of violence is defeated, he should, according to Mahatma GANDHI, never co-operate with the aggressor and thus perpetuate his own defeat and allow the aggressor to enjoy his unrighteous victory, for this leads to the moral fall of the victim. Non-violent resistance and non-co-operation against and with the violent aggressor are thus the two new weapons which Mahatma GANDHI has invented for the use of those who are on personal, social, moral or spiritual grounds sworn to *a-himsā,* and it is expected that in future when man has largely shaken off his present barbarity, these weapons will be greatly used. Then the world may become heavenly and humanity divine. It is the duty of all the followers of those great teachers who taught the principle of *a-himsā* to hasten that day by actually following it in practical life. The world never needed this lesson so much as it needs it to-day when it regards itself more civilized than ever before.

अहिंसा सत्यमस्तेयं शौचमिन्द्रियनिग्रहः ।
एतत्सामासिकं धर्मं चातुर्वर्ण्येऽब्रवीन्मनुः ॥ *Manusmṛti*, X. 63.

अहिंसा परमोधर्मः । *Mahābhārata, Anu.*, 114.

अहिंसाप्रतिष्ठायां तत्सन्निधौ वैरत्यागः । *Yogadarśana,* II. 35.

SOCIAL PHILOSOPHY OF MAHADEV GOVIND RANADE

By MUKUT BEHARI LAL

ONE hundred years ago Mahadev was born of parents of moderate means in the Nasik District. In his childhood he could not be regarded as a promising boy. He was dull, clumsy and ungainly.[1] Though he cast off his dulness soon he remained throughout his life shabby, stern and gloomy and by no means a pleasant companion.[2] Nor were his social surroundings very promising for the growth of personality. His mother died when he was but a boy of twelve, while his father was too orthodox, rigid and stern to infuse the boy with enthusiasm. With its political independence Maharastra had lost its dynamic spirit and aggressive vitality. It had ceased to conquer and lived on traditions. The atmosphere was too dull to inspire. But neither Mahadev was denied all good qualities, nor Maharashtra was devoid of life and vitality. He was endowed with some exceptional qualities, which enabled him to withstand the depression which enveloped the society in general and to respond to the deeper urges and the finer aspirations of his time. He was studious, thoughtful, calm and steady and possessed earnestness of purpose, sincerity in action and a keen sense of justice and fair play. These qualities had destined him, as prophesied by his distinguished teachers, to make his mark in public life and to achieve the highest distinction.[3] When he went up to college, ideas of reform were in the air. He came in touch with men who were models of enlightened citizenship and were full of zeal for the advancement of the community. Through them the spirit of the times poured in on Ranade's soul.[4] He came upon the scene at a time which spiritually, politically and socially could be called a twilight hour. But the twilight was sufficiently charming to inspire Ranade to work throughout his life for the dawn of a new era of freedom, progress and prosperity. Circumstances did not permit him heroic actions, but moulded him for the role of a constructive nation-builder. In fact, temperamentally he was best fitted for the task determined by the age he was born in.

[1] Kellock: Mahadev Govind Ranade, p. 5.

[2] V. S. Srinivasa Sastri: Address on Centenary of the Birthday of M. G. Ranade, p. 8.

[3] Kellock: Mahadev Govind Ranade. p. 11.

[4] Kellock: Ibid, p. 20.

Calmness and steadiness of mind which he possessed prevented him from being exhilarated or excited but allowed him to work patiently and steadily without being depressed or upset. Through severe discipline constantly applied to himself he developed marvellous self-control, forbearance and equanimity.[5] No man judged himself more severely, or others more charitably than Mr. Ranade. He was never known to lose his temper or return abuse for abuse. He readily forgave, harboured no resentment and made no enemies, if he could help it.[6] He chose the path of conciliatory co-ordination[7] for steady progress in all directions and mentally equipped himself for the same. History, economics, politics, law, religion, philosophy and culture, all were studied and mastered. His studies were confined neither to Indian thought and conditions nor to British thought and institutions. They comprehended both and extended to thoughts and movements of other European countries. His studies were not merely assimilative but practical, creative and directive. He believed in the unity of knowledge and service. He studied not so much for knowledge as for the reconstruction of India. In fact, his social thought was to a large extent evolved out of his efforts to solve problems and difficulties with which the nation was faced. His social philosophy was essentially a creative synthesis and was not modelled exclusively on any particular system of thought. Like other Indian students of economics he did not blindly follow the classical economists of Great Britain, but in a masterly survey of economic thought and experience criticised the claim of universalism for their doctrines and laid the foundation of Indian political economy. Similarly liberalism was distinguished from individualism, the latter was rejected, the former was coordinated with ethics of humanism, and social liberalism of humanistic character was evolved. Ranade's conceptions of history and religion were also creative syntheses. His social thought was essentially directive. He was the guiding spirit of many a movement of his times. His thought has served India well for fifty years and has not yet lost altogether its vitality and utility. It may be regarded as imperfect and incomplete in some respects, but it surely deserves to be fully taken into consideration when a new synthesis is to be evolved for India.

Ranade belonged to the historical school of social thinkers. His method was not deductive but historical, "which takes

[5] Gokhale: Speeches, p. 932.

[6] V. S. Sastri: Op. cit., p. 6.

[7] V. S. Sastri: Op. cit., p. 6.

account of the past in its forecast of the future."[8] His conception of the world was dynamic and not static. Change is the law of life. "It is not possible for a living being, be the unit an individual or a collection of individuals, to remain stationary at any stage of progress achieved by them for any considerable time without, in fact, undergoing the slow process of decay or degradation."[9] Evolution is, thus, a fundamental principle of social order. But it is not the denial of the past but its adjustment to the present. Progressive evolution eliminates what has outlived its utility but preserves what is essential and useful in a new synthesis. So Ranade did not repudiate the past but discerned the essential from non-essential, purified the spirit of outlived forms, denied useless forms and tried to reconstruct a new social order in correspondence with the present, preserving the spirit of the ancient Indian culture and assimilating what was good in the occidental. He received inspiration from the past and wished to maintain continuity with it correlating his thought with healthy and vitalising elements of ancient traditions and orthodoxy. In support of his social reforms he constantly appealed to the healthier regulations and customs of the past, and pitched enlightened orthodoxy against blind orthodoxy. But it cannot be said that he could be against change, if change meant going against the prescriptive customs and observances of our community. He did not live for the past or in the past. He lived in the present and for the future. He was not a revivalist or traditionalist but an evolutionist. In his opinion, "revival is impossible."[10] "The dead and the buried or burnt are dead, buried, and burnt once for all, and the dead past cannot, therefore, be revived except by a reformation of the old materials into new organised beings."[11] His constant references to the remote past were partly due to his desire to maintain historical continuity and partly a concession to the then prevalent traditionalist attitude of his countrymen. He, however, regarded reliance on textual authority not only as unhealthy but also as the root cause of our helplessness and advised us to cultivate the sense of self-respect and to rise to the dignity of self-control by making our conscience and our reason the sole guides of our conduct. "Reverence all human authority, pay your respects to all prophets and revelations, but subordinate that reverence to the

[8] **Ranade: Indian Political Economy, p. 21.**

[9] **Ranade: The Sutra & Smṛti Texts on the Age of Hindu Marriage.**

[10] **Ranade: Revival and Reform.**

[11] **Ranade: Ibid.**

Divine command in us."[12] Ranade believed in progress through the fusion of cultures, contact of thought and exchange of experiences. He, therefore, carried on comparative studies of Indian conditions and advised the use of such ways and means for the amelioration of the people as proved useful under similar conditions to people of other parts of the world. Adaptation and assimilation were, thus, advocated. Of course, he was definitely opposed to the imposition or wholesale adoption of a foreign culture or a pattern of social order as well as to a change to suit the fashion of the day. "No nation" he urged, "has any destined place in history which changes its creed and its morals, its customs and its social polity with the facility of fashion."[13] He agreed with economists and sociologists of the historical school that social laws must be sought in the history of social evolution and that they vary in different countries and at different stages. As an evolutionary thinker, Justice Ranade belived that the law of relativity and correspondence holds good in all social sciences, economics, politics and sociology.[14] He agreed with German economist List that universalism and perpetualism in economic doctrine are both unscientific and untrue.[15] Life can be carried on only by the harmonising of thoughts and acts. Conduct required by circumstances must modify beliefs unless beliefs can prescribe conduct required by such circumstances. According to him, the idea of the divorce of theory and practice is "a mischievous error, which relegates science to the sterility of an ideal dream or a puzzle, and condemns the art to the position of a rule of the thumb."[16] He maintains that "Theory is only enlarged practice. Practice is theory studied in its relation to proximate causes."[17] Ranade had no doubt that "through the ages one increasing purpose runs" and was delighted to point out how ideals of social justice had widened and improved, how old evil customs had been left behind and how true conception of God had gradually been reached.[18] But Ranade did not believe in historic determinism or automatic progress. He was conscious of the possibility of the arrest of growth and consequent decay.

[12] Ranade : Ibid.

[13] Quoted in Mahadev Govind Ranade (Natesan), p. 58.

[14] Ranade : Indian Political Economy, p. 2.

[15] Ranade : Ibid.

[16] Ranade : Ibid, p. 21.

[17] Ranade : Ibid, p. 21.

[18] Kellock : Op. cit., p. 171.

He upheld the growth of both the subjective and the objective in harmony with the Divine Will through human efforts, individual and collective. He denied the exclusive claims of nature and man. He was definitely opposed to materialism which denies the independent existence of consciousness. Materialism, he asserts, fails to explain "how comes it that this casual combination of molecules results in the ascending scale first, of life, next of conscious life, further on of thought, self-consciousness and responsible will, which does not come within the domain of chances, but is guided by purpose which is the negation of chances?"[19] Man is an independent reality. He is "not a form or activity of matter as physically understood."[20] Nor is he "a mere creature of necessity,"[21] or "a mere diagonal result of opposite forces acting upon him."[22] But equally opposed was he to the idea that the only reality is man himself. Matter, he asserts, "existed before he came into life, and will exist after he and his race cease to live."[23] Thus, according to him, both matter and man are real. He also believed in the harmony of the two. But according to him "this harmony springs not from man's consciousness only nor is it born of inert matter. It not only links us with nature, but it links us and nature alike with the Infinite Existence."[24] He, thus, had faith in the pre-eminence of the Supreme Spirit and in the supremacy of the Divine Will and purpose.[25] But he holds that "the human soul has a distinct and subordinate existence and is not an emanation or a reflection of God's being,"[26] and that the fact that "God is a moral governor in no way conflicts with the voluntary and limited freedom of man's activities."[27]

Man, he thinks, "possesses a sort of delegated freedom to choose between right and wrong, between good and evil,"[28] has "the power of self-determination and of being a causal agent",[29]

[19] Ranade: Philosophy of Indian Theism, p. 9.

[20] Ranade: A Theist's Confession of Faith, XI.

[21] Ranade: Philosophy of Indian Theism, p. 20.

[22] Ranade: Ibid, p. 20.

[23] Ranade: Ibid, p. 11.

[24] Ranade: Ibid, p. 16.

[25] Ranade: A Theist's Confession of Faith, X.

[26] Ranade: A Theist's Confession of Faith, XI.

[27] Ranade: Ibid, XII.

[28] Ranade: Philosophy of Indian Theism, p. 20.

[29] Ranade: Ibid.

and can "achieve by effort self-conquest."[30] These features distinguish him from brute creation and constitute his "highest glory and his greatest responsibility."[31] They furnish the bases of all law and government, morals and manners, social and family arrangements, literary and scientific culture and finally of religion and worship.[32] But the unconscious freedom of man is in a great measure restrained by "the influences of the time and place he is born in, and of the society in which he moves, and early education, and associations and physical temperament."[33]

Such a system of social philosophy does not regard human life as a vanity and dream but holds such a view as "atheism in its worst form."[34] It links up a man in a spiritual unity with not only other human beings but also other animated beings and advocates the perfection of life, not through asceticism but through work for all and with all. It holds that practices of austerities and the virtue of ascetic life "deprive us of the education and discipline of self-government which living in society has a tendency to foster in us."[35] It teaches "toleration to all, self sacrifice and the duty of love not only of man to man but to all animated beings."[36] It advocates the development of the character of purity, service and devotion. It advises us to be guided by our conscience,[37] to cultivate a healthy sense of true responsibility and dignity of our nature and of destiny as men,[38] and to bring about self-regeneration by properly trained will, power and conscious efforts.[39] Ranade advises us to be "men, stalwart puritan men, battling for the right, not indifferent nor sanguine, trustful but not elated, serious but not dejected."[40] He urges us "to work our own liberation and our own betterment."[41] For the purpose, "our muscles and sinews have to be hardened, our hearts have to be humanised

[30] Ranade: A Theist's Confession of Faith, XV.

[31] Ranade: Philosophy of Indian Theism, p. 20.

[32] Ranade: Ibid.

[33] Ranade: A Theist's Confession of Faith, XV.

[34] Ranade: Revival and Reform.

[35] Ranade: A Theist's Confession of Faith, XXVIII.

[36] Ranade: Philosophy of Indian Theism.

[37] Ranade: Revival and Reform.

[38] Ranade: Ibid.

[39] Ranade: Ibid.

[40] Ranade: The Telang School of Thought.

[41] Ranade: Ibid.

to the sense of justice in all direction; and our intellect to be freed from prejudice and prepossessions, freed from the beliefs of superstitions which have been long dominating over us."[42] He, thus, urges us "to purify ourselves, to develop our powers by our own exertions in conquering the difficulties in our ways" and "to see that our thoughts, our speech and our actions are inspired by a deep love of humanity."[43]

Justice Ranade advocated not only the purification of man but also the reform of his surroundings and social institutions. He believed in the influence of the objective world over the man and was conscious that the development and perfection of the whole man are not possible without the reform of his enviroment. Social surrounding, he urged, is to be so reordered as to help the physical, intellectual and moral growth. Ranade maintained that different aspects of social life are linked together like organs of a human body and that the interdependence of life requires all-round activity and all-sided development.[44] "You cannot have a good social system when you find yourself low in the scale of political rights, nor can you be fit to exercise political rights and privileges unless your social system is based on reason and justice. You cannot have a good economical system when your social arrangements are imperfect. If your religious ideals are low and grovelling, you cannot succeed in social, economical or political spheres."[45] Ranade, therefore, held that "the claims of some kind of work might be more absorbing than those of others, but each must have its time and place and proportional attention devoted to it."[46] Reforms in social, political and economic systems were not deduced by him deductively from the first principles of his own metaphysics or social philosophy. Problems were studied historically and comparatively, and the accumulated experience and thought of the world were taken into account, before laws of social development and schemes of reforms were drawn up.

Love of God is the cardinal principle of Ranade's life and thought. Like other theists, he holds that human souls have spiritual wants and spiritual senses, connecting it with the world of spirits, and directing it to God,[47] who is one without

[42] Ranade: Ibid.
[43] Ranade: Vashishta and Viswamitra.
[44] Ranade: The Telang School of Thought.
[45] Ranade: Congress and Conference.
[46] Ranade: Ibid.
[47] Ranade: A Theist's Confession of Faith, I.

a second.[48] God is Lord, Father, Judge and Moral Governor of all human souls.[49] God's Will governs and regulates inanimate and unconscious matter by a scheme of general or uniform providence; and the same Will governs self-conscious and voluntary spirits by a scheme both of general and special providence. Both schemes of Providence conduce to the glory of God and the welfare of his creatures.[50] Everyone is advised to inculcate voluntary and self-conscious obedience to the law of God as discovered by our instinct, reason, conscience, and religious emotions; partially to attain to God's goodness in his nature here; to realise his relation to God and to fit himself for a higher existence.[51] Ranade regards God as the absolute object of reverence, faith and love.[52] He believes that man's salvation is effected under God's grace by faith, devotion, prayer and submission to God's providence, by the love of man and love of God, which these instil into our hearts, and by the practice of virtue and piety.[53] In the absence of love and devotion Ranade has no faith in the virtue of other ways of salvation strongly insisted upon for the purpose of salvation in diverse systems of faith, though he felt that along with love and devotion some of them may be cultivated with advantage as an aid.[54]

Deep love of human beings is another cardinal principle of Ranade. Love of man is practically inseparable from love of God.[55] Ranade thinks that love of man is based on spiritual relations of human souls[56] and is strongly and deeply rooted in human nature.[57] It is a necessary element in human salvation,[58] and has a great influence in forming the moral type or ideal.[59] It knows no distinction of caste, creed and race. It is opposed to isolation and stands for all attracting expansiveness. Love of humanity must be the root of our morality. It must be a

48 Ranade: Ibid, IX.
49 Ranade: Ibid, VIII.
50 Ranade: Ibid, XII.
51 Ranade: Ibid, VII.
52 Ranade: Ibid, VII.
53 Ranade: Ibid, XXI.
54 Ranade: Ibid, XXI.
55 Ranade: Ibid, V.
56 Ranade: Ibid, I.
57 Ranade: Ibid, V.
58 Ranade: Ibid, XXI.
59 Ranade: Ibid, V.

constant inspiration to us. "Our thought, our speech, our action must be inspired by deep love of humanity."[60]

Ranade believed in liberty. He stood for the liberation of conscience from external authority, of the country from foreign political and economic domination, and of the intellect from prejudices, prepossessions and beliefs of superstitions. Though man is not freed from the authority of God, conception of God and religion is so recast that religious life is based on conscience and an individual is freed from the thraldom of textual authority, infallibility of a prophet and the mediation of a redeemer. We are advised "to inculcate voluntary and self-conscious obedience to the law of God as discovered by our instinct, reason, conscience and religious emotions"[61] and to remember that "the work of regeneration is one of self-effort alone, and cannot be done by substitution"[62] and are assured that "the revelation is a perpetual stream which never ceases to flow."[63] Thus, the paramountcy of conscience is established. Ranade believed that "the rights of individual conscience are paramount over all other considerations of mere political and social expediency and are limited only by the fact, that there is no outrage done to morality and that the toleration of no man's right extends to the imposition of any restraint upon the equally free exercise of the other people's rights."[64] His conception of liberty was positive and not negative, as he understood liberty not in the sense of the want of restraint, but in the sense of self-government and self-determination by the individual. He was definitely opposed to over-emphasis on the liberty of contract and on individual interests. He believed in the harmony of individual liberty and common good and was not prepared to sacrifice the latter for the former. In his opinion, the fundamental postulates of the individualist school of economists "are literally true of no existing community" and cannot serve the purpose of India.[65] He held that "the modern thought is veering round to the conclusion that the individual and his interests are not the centre round which the theory should revolve, that the true centre is body politic of which that individual is a member, and that collective defence and well-being, social education and discipline, and the duties, and not merely the interests, of men, must be taken into account, if

[60] Ranade: Vashishta and Vishwamitra.

[61] Ranade: A Theist's Confession of Faith, VII.

[62] Ranade: Ibid, XXXVII.

[63] Ranade: Philosophy of Indian Theism, p. 24.

[64] Ranade: A Theist's Confession of Faith, XXXVIII.

[65] Ranade: Indian Political Economy, p. 9.

the theory is not to be merely utopian."[66] He agreed with the German Economist List that the nation's education is of far more importance than the present gain of its individual members, as represented by the quality of wealth measured by its value in exchange.[67] He, thus, preferred common good to individual interests, would have based the latter on the former, and was prepared to support the interference of the state in individual liberty for the protection and promotion of common good.

Ranade stood for the equality of men and women and would not tolerate any custom or tradition which would deny any man or woman equal freedom or equal opportunity of progress. It was a cardinal principle of his faith that "all men and women are equally the children of God, and in His sight no distinction obtains between man and man."[68] He was opposed to the perception of factitious difference between men and men, due to heredity and birth, and bewailed of the subordination of women and of the lower castes to the length of depriving them of their natural respect for humanity.[69] He asserted their essential equality, though he recognised that men differ from men in natural capacities and aptitudes. He was prepared to admit that heredity and birth are factors of some importance in human development but he held that they were not the all important factors, and could be "controlled and set up by a properly trained will, when this will is subservient to a higher Will."[70] They do not entitle a person to deny essential equality with men. Ranade holds that it is not birth that is to be venerated but qualities of character.[71] His conception of equality was enriched with his doctrines of the dignity of human nature and the deep love of humanity.

Ranade has laid considerable emphasis on justice, personal and social. He advises us "a steady devotion to all that seeks to do justice between man and man."[72] He holds that "individual purity and social justice have permanent claims over us all."[73] His conception of justice is not negative but positive. He stands not only for the denial of inequity but also for the

[66] **Ranade:** Ibid, p. 21.

[67] **Ranade:** Ibid, p. 19.

[68] **Ranade:** **A Theist's Confession of Faith, XXII.**

[69] **Ranade:** **Revival and Reform.**

[70] **Ranade:** **Ibid.**

[71] **Kellock:** **Mahadev Govind Ranade, p. 158.**

[72] Note on the **Deccan Sabha quoted by Kellock: Mahadev Govind Ranade, p. 168.**

[73] **Ranade.**

construction of equitable order. Unlike Herbert Spencer who bases his conception of justice on the survival of the fittest in a social order wherein the freedom of contract is assured and life and property are protected by violence, Ranade bases his conception on love of God and love of humanity. He neither makes the radical distinction between family ethics and state ethics, nor agrees with the idea that the shouldering aside of the weak by the strong is a decree of a large, far-seeing benevolence. He does not think that there is perfect equality in the power of contract between individuals and individuals and therefore feels that justice cannot be secured to all by assuring the freedom of contract. He will not leave the weak to the exploitation of the strong in the name of progress through the freedom of contract and the survival of the fittest. He will protect the weak from exploitation and secure justice to him against the strong, through legislation, if necessary. He agrees with the advanced theory that freedom can be conceded "where the parties are equally matched in intelligence and resources ; when this is not the case, all talk of freedom and equality adds insults to the injury."[74] Ranade, therefore, supports the arrangement of the distribution of the produce among the needy many and the powerful few in a spirit of equity and fairplay through the regulation of the freedom of contract.[75]

Ranade was a social liberal. He believed in liberalism but did not like the individualistic outlook of English liberals of the eighteenth century. He had an ethical outlook of a theist, which did not allow him to make self-interest the centre of his social theory. He welcomed such tendencies in the economic thought of Europe as established "the predominant claim of collective welfare over Individual Interests."[76] He stood for a democratic responsible government and favoured the training of the people in its arts and habits. His conception of the State was not a police power but the culture state. He agreed with Herbert Spencer that "all progress in social liberation tends to be a change from the law of status to the law of contract, from the restraints of family or caste customs to the self-imposed restraints of the free will of the individual."[77] But he saw no reason why the sphere of government should be limited to the protection of property and person from domestic and foreign attack and to provision for the freedom and enforcement of contract and not extend to the performance of

[74] Ranade: Indian Political Economy, p. 31.

[75] Ranade: Ibid, p. 31.

[76] Ranade: Ibid.

[77] Ranade: State Legislation in Social Matters.

positive services within certain limits. Ranade holds that "what a single man or a combination of men, can best do on their account, that the state may not do; but it cannot shirk its duty if it sees its way to remedy evils, which no private combination of men can check adequately or which it can deal with more speedily and effectively than any private combination of men can do."[78] On this principle he justifies state action in many departments such as the enforcement of education, sanitation, factory legislation, and of state undertakings like the postal service. On the same principle he favours state aid and regulation for the promotion of economic development of the country and social standards of the community. Ranade felt that it was necessary at certain stages of men's progress to secure the assertion of right ideas by the highest sanctions and to invoke the action of the state as representing the highest and most disinterested wisdom available for the moment.[79] According to him, "whenever there is a large amount of unredressed evil, suffered by people who cannot adopt their own remedy, the state has a function to regulate and minimise the evil, if by so regulating it, the evil can be minimised better than by individual effort and without leading to other worse abuses."[80] State aid and regulation were advocated for the promotion of the industrial development of economically backward countries. Ranade supported the protection of the poor and the weak against the strong, even at the cost of the interference with the free right of contract. Nor was Ranade wedded to the policy of free trade. He would support the policy of protection for the preservation of the vital economic interests of the country and for securing a balanced economy for the nation. "The function of the state is to help those influences which lead to secure National Progress through the several stages of growth, and adopt free trade or Protection as circumstances may require."[81] In short, according to Ranade, the state is "the national organ for taking care of national needs in all matters in which individual and co-operative efforts are not likely to be so effective and economic as national effort."[82] The question of the function of the state is, thus, "one of time, fitness, and expediency, and not one of liberty and rights."[83]

[78] Ranade: Ibid.

[79] Ranade: Ibid.

[80] Ranade: Ibid.

[81] Ranade: Indian Political Economy. p. 82.

[82] Ranade: Ibid p. 82.

[83] Ranade: Ibid p. 82.

Justice Ranade does not believe in the universal validity of Economic Laws. They are, he urges, generalisations of economic conditions and vary with the change in the latter. "Relativity and not absoluteness characterises the conclusions of Economic Science.[84]" The method to be followed is not the deductive but the historical method which takes into account the past in the forecast of the future.[85] Every country has its own political economy suited to, and variable with, its own conditions. India cannot bind itself by economic laws enunciated by English economists as universal laws but really applicable to England of a particular age. Indian political economy must be based on Indian conditions and needs. Ranade believed in the predominant claim of collective welfare over individual interests. He repudiates the theory of the territorial division of labour by which the orthodox economists assign to the torrid zone regions of Asia the duty of producing raw materials and claim for the advanced European countries the work of transport and manufacture. He feels that such a division of production, if permanently stereotyped, consigns Asia to an industry which is under the bane of the law of diminishing returns and has to work under the disadvantage of an uncertain rainfall. Nor is the line of separation justified by any inevitable natural necessity. He says that "(1) In the first place, the Torrid Zone people may fairly appeal to past history, when their skilled products found a ready market in temperate kingdoms, and excited such jealousy as to dictate prohibitive sumptuary laws both in ancient Rome and in modern England. (2) They may also urge that the natural fitness of things requires that the manufacture should spring up where the raw materials grow, and where, besides, there is demand for the manufactured produce, rather than that bulky goods should be transported many thousands of miles over land and sea, and returned the same way back. (3) The differences in favour of temperate regions are all modern growths due to the employment of steam machinery, and the abundance of cheap iron and coal. This is real advantage and has to be faced, but if it can be faced, there is no natural incongruity in an arrangement by which industry would return to its ancient home with a double saving in time and cost."[86]

Ranade deplores the gradual ruralisation of India and the rapid decadence of its manufacture and trade and holds that the

[84] Ranade: Indian Political Economy, p. 21.

[85] Ranade: Ibid.

[86] Ranade: Ibid, p. 24.

economic domination which the capital, enterprise and skill of one country exercise over the trade and manufactures of another is "more formidable" than even the political domination of one country by another.[87] He accused the Government of regarding India as "a plantation, growing raw produce to be shipped by British agents in British ships, to be worked into fabrics by British skill and capital, and to be re-exported to the dependency by British merchants to their corresponding British firms in India and elsewhere."[88] He maintained that the defective railway policy of the Government and want of proper industrial policy were to a large extent responsible for the destruction of local indigenous industries and for the increasing dependence of the people on agriculture alone.[89] People were advised to work patiently for correcting the disproportion between the engrossing production of raw agricultural produce and the backwardness in the production and distribution of manufactured produce. They were urged to organise industry and capital on the joint stock principle for collective and large undertakings as home made industries could not thrive in competition with industry moved by cheap natural agency.[90] The Government was also requested actively to encourage and develop industries in India. The Government of India, he feels, should help the people to form deposit and finance banks, and facilitate recoveries of advances made by them, encourage new industries with guarantees and subsidies or loans at low interest, pioneer the way to new enterprises, establish technical institutes and buy more largely the stores they require in India and in many cases produce their own stores.[91] He also advocated a regular system of immigration from thickly populated poor agricultural tracts to sparsely populated new and virgin districts in a desideratum.

Ranade did not accept the idea that the unearned increment is a leading feature of the Law of Rent in India. He holds that the so-called land tax in India is not a tax on rents proper but frequently encroaches upon the profits and wages of the poor peasant who has to submit perforce to a loss of status and accommodate himself to a lower standard of life as pressure increases. The state's monopoly of land and its right to increase the assessment at its own discretion were, he declared,

[87] **Ranade: Present State of Indian Manufactures and Outlook of the Same.**

[88] **Ranade: Ibid.**

[89] **Ranade: Netherlands India and the Culture System.**

[90] **Ranade: Inaugural Address, Industrial Conference.**

[91] **Ranade: Ibid.**

the two most pre-eminent obstacles in the way of the country's growth in material prosperity. In his opinion, "the elements of national prosperity are wanting in a country whose principal resource is agriculture, and that agriculture is in the hands of a thriftless and poverty stricken peasantry, who are weighed down with heavy charges, and whose life and labours are not cheered by the charm and strength inspired by a sense of property." He proposes the reform of the land tenure system so as to do away with the uncertainty and the burdensomeness of the temporary settlements. He also advocates the protection of tenants from the abuse of competition by conferring fixity of tenure, by adjusting rents judicially for a term of years, and by imposing limitations on its increase. He proposed that "the permanent assessment claimable from all soils should be once for all fixed at a proportion of the gross stable produce, the proportion being based upon the principle of dividing the net profits in kind, half and half between the Government and the private holder" and that "this kind payment so fixed should be unchangeable for all time, whatever improvement the private holder may effect in his land," though money values, to which kind payment would be commuted, would be "liable to periodical changes according as prices permanently rise or fall over a great part of the country." He favoured the extension of banking and loan facilities to encourage the flow of capital into the agricultural industry and supported debt legislation to protect the ryot from money-lenders. In his opinion, rates of interest should be fixed in transactions between the poor disunited indebted classes and the money-lenders and immovable property should be protected from being sold away for improvident debts, not secured on the same. He approved the Deccan Agriculturists' Relief Act, which was intended to remove the legal encumbrances that were causing hardships to the ryot in regard to suits for the payment of debts, to empower courts to go behind the actual contracts where there was a manifest unfairness and to protect the ryot from the payment of compound interest, arrest and imprisonment for debt and sale of land for unsecured money debts. For the promotion of agricultural prosperity Ranade also suggested spread of education, the revival of industries and the diversion of some of the surplus labour from the land ; a diminution of taxes and of the extravagant cost of Government ; foresight in forest conservancy and especially avoidance of the injury to agriculture wrought by denuding the mountains, hills, uplands, and river banks of trees.[92]

[92] Kellock : Op. cit., pp. 33-44.

In his political views he agreed mostly with promoters of the Indian National Congress who used to seek his advice on important political questions. Like them, he regarded the British authority over India as a discipline imposed by Providence. He favoured gradual democratisation of authority in India but did not contemplate the severance of the British connection. He urged direct Indian representation on the House of Commons and the gradual growth of representative and self-governing institutions in India. The decentralisation of authority and the simultaneous examination of the Civil Service in India were favoured, while racial discrimination and arrogance as well as laws of repressive character such as the Vernacular Press Act were opposed by him. He advocated the introduction of a proper constitution in Indian States. It was proposed that a council consisting of the heads of the different departments and a few selected representatives of the non-official classes should be established under the presidentship of the Ruler of the State. In his opinion, the Council should be the final authority, without whose sanction no new tax or new law or great innovation on existing forms should be made. The responsible minister, who should be the leader of the Council, should be appointed by the Chief of the State with the approval of the representative of the Brisish power and be irremoveable except for clearly proved incapacity, disloyalty, crime or misdemeanour proved to the satisfaction of both the Chief and the British Agent. The Chief would only exercise power by way of regular appeal from the order of his minister and there would be no interference with the delegated power of the minister until his order was passed, and any of the parties affected by it appealed to the Chief. He urged that privy purse should be separated from the public purse, the Civil Service List be once settled and offices be bestowed on subjects of the State who are of good family and who have qualified by passing prescribed examinations. There should be written laws, an annual statement of accounts, clear division of executive and judicial duties, and of civil and military duties. Land-revenue should be permanently settled or for long terms on moderate and fixed principles and all other burdens be lightened. Local Government should also be freely fostered under proper control. In this scheme the intervention of the Political Agent was obviously proposed because of the political inexperience and backwardness of the people of States and his control was to last till "the more genuine home growth of native public opinion learns to respect itself and enforce obedience."[93]

[93] Ranade: A Constitution for Native States: *Jour. Sarvajanik Sabha.*

Justice Ranade was a great social reformer. His scheme of social reform was very comprehensive. It included opposition to child marriage, enforced widowhood, ill-assorted marriages between old men and young girls, the dowry system with its attendant evils and hardships, extravagant expenditure on marriage festivities and customs of obscenity connected with the Holi and other festivals and the profession of Nauch girl. Ranade favoured foreign travel, temperance, elevation of low castes, inter-marriage between castes, the re-admission of converts, the education of girls, equal status of women in society and the regulation of endowment and charities. But more than reforms in social customs and institutions, he advocated the change of spirit, ideal, and character. "The thing to be reformed was their own self, heart, head and soul."[94] He urged that "exclusiveness, haughtiness and pride, cruelty and misery of all kinds," be discarded and "the spirit of justice, charity, mercy, toleration and appreciation of all" be infused in our minds.[95]

Justice Ranade had no hope "of seeing any genuine reform movement springing up from within the heart of the nation, unless that heart is regenerated, not by cold calculation of utility, but by the cleansing fire of a religious revival."[96] But he deprecated the view that it was only through a religious reformation that advances could be made, and that all the efforts of the reformers ought to be directed towards the purification of religion. Justice Ranade claimed for his religion an inspiring historical past, interlinking the Prarthana Samaj movement with the Bhagawat Dharma and the Hindu protestanism of Maharasthra saints. In his opinion, Indian theism, the Bhagawat Dharma, is built on the rock of the direct communion of the individual soul with the soul of the Universe to which it is linked by the tie of faith, hope and love. It is not bound down to any particular revelation but is open to the best influences of all revelations, regarding revelation as a perpetual stream which never ceases to flow. Indian theism, Ranade emphasises, teaches toleration to all, self-sacrifice, and the duty of love not only of man to man but to all animated beings.[97] He invites our attention to certain principal features of the religious movement of Maharashtra saints. He holds "it modified the strictness of the old spirit of caste exclusiveness. It raised the Shudra classes to a position of spiritual power

94 Ranade: Address at Hislop College, 1891.

95 Ranade: Address at Lahore Conference, 1893.

96 Ranade.

97 Ranade: Philosophy of Indian Theism, pp. 24 & 25.

and social importance almost equal to that of Brahmans. It gave sancity to the family relations, and raised the status of woman. It made the nation more humane, at the same time more prone to hold together by mutual toleration. It suggested and partly carried out a plan of reconciliation with the Muhammedans. It subordinated the importance of rites and ceremonies, and of learning and contemplation, to the higher excellence of worship by means of love and faith. It checked the excesses of polytheism."[98] He bases his religious reformation on the aforesaid teachings of Bhagawat Dharma and outstanding features of the Hindu protestantism of Maharashtra saints. He also invites attention to certain Christian virtues for incorporation in the national character, such as "the power of organisation, active hatred of sin, and indignation against wrong-doing in place of resigned indifference, a correct sense of the dignity of man and woman, active philanthropy and a feeling of fraternity, freedom of thought and action."[99] Through religious reformation Ranade wished to secure the renovation of the spirit, the cleansing of men's hearts, the stirring of conscience, the rehearing of the voice of God within ; to establish the paramountcy of conscience and self-efforts, to emphasise the dignity of human nature and destiny, and to infuse deep love of God and human beings as well as sense of justice and charity. Like Raja Ram Mohun Roy, he did not wish to preach a new dispensation, but aspired only to establish harmony between men's accepted faith and their practical observances by a strict monolatrous worship of the one Supreme Soul, a worship of the heart and not of the hands, a sacrifice of self and not of the possessions of the self. He wanted men and women to cherish their own ancient treasures of faith and to secure their freedom from the bondage of superstition and ignorance.

Ranade was an evolutionist. He believed in the inevitability of slow growth. "The process of growth" he thinks, "is always slow, where it has to be a sure growth."[100] He did not believe in the brave resolve to break with the past and do what our individual reason suggests as proper and fit. In his opinion, the reformer has "to produce the ideal out of the actual, and by the help of the actual."[101] It is not possible to dam up altogether or force into a new channel the "one continuous stream of life flowing past us."[102] Ranade, therefore, advises

98 Ranade: Hindu Protestanism.

99 Ranade: Philosophy of Indian Theism, p. 28.

100 Ranade: Inaugural Address at National Social Conference, 1891.

101 Ranade: Ibid.

102 Ranade: Ibid.

moderation which implies "the condition of never vainly aspiring after the impossible or after too remote ideals but striving each day to take the next step in order of natural growth, by doing the work that lies nearest to the hand in a spirit of compromise and fairness."[103] He, thus, does not favour shocks and storms but gradual modification through moderate actions and proper public education. He attaches considerable importance to the latter. Right thoughts in favour of reforms, he urges, ought to be planted first in the minds of the people. For the purpose he advised appeal to conscience and reason on one hand and to healthy customs and traditions of the community and the accumulated experience of the world on the other. Dissensions he would try to avoid as much as he could. He would strive for reforms but would stop when the strain was likely to cause a rupture. To avoid unnecessary strain, he would refrain from adopting a defiant attitude and would try to win the people and authorities over by his sweet reasonableness, judicious behaviour, moderate attitude and pure character. He would also avoid prejudice against public workers as may be caused by the unnecessary adoption of disagreeable outward forms. He would advise them to remember that "it is not the outward form but the inward form, the thought and the ideas which determine the outward form, that has to be changed, if real reformation is desired."[104] Ranade would welcome state regulation and help for social, cultural and economic development. But state help he regarded as "a subordinate factor."[105] "It is," he urged, "the individual and collective man who has to develop his powers by his own exertions in conquering the difficulties in his way."[106] Justice Ranade submitted a number of petitions and memorials to the Government and urged the submission of Indian case before the British public but he was conscious that "politics is not merely petitioning and memorialising for gifts and favours."[107] He valued political activities "not for the particular results achieved, but for the process of political education which is secured by exciting interest in public matters and promoting the self-respect and self-reliance of citizenship,"[108] and knew that "gifts and favours are of no

[103] Ranade: Note on the Deccan Sabha, quoted by Kellock: Mahadev Govind Ranade p., 163.

[104] Ranade: Revival and Reform.

[105] Ranade: Inaugural Address, Industrial Conference.

[106] Ranade: Congress and Conference.

[107] Ranade: Ibid.

[108] Ranade: Note on the Deccan Sabha, quoted by Kellock: Mahadev Govind Ranade, p. 164.

value unless we have deserved the concession by our own elevation and our own struggles."[109]

Justice Ranade was proud of the achievement of Indian intellect and had an abiding faith in the destiny of India. He regarded India as a favoured land "under the severe discipline of a high purpose."[110] He was not only proud "of the past of our great ancestors in whose time our philosophies were developed, our literature and science grew up, and our people went to foreign lands, far off to Java, to the East, and far away beyond Mongolia to the North;"[111] but was also appreciative of Indian Muslim's contribution to Indian culture.[112] Justice Ranade was definitely of opinion that "in the modern condition of life the India that is to be born will have no room for mere distinction of race, creed, colour."[113] He wished us all "to be Indians first and Indians to the last over every other consideration which has separated us so long and made a united India impossible."[114] For the promotion of national unity, he advised "pursuit of high ideals, mutual sympathy and co-operation, perfect tolerance, a correct understanding of the diseases from which the body politic is suffering and an earnest desire to apply suitable remedies."[115] He hoped that "with a liberated manhood, with buoyant hope, with a faith that never shirks duty, with a sense of justice that deals fairly to all, with unclouded intellect and power fully cultivated, and, lastly, with a love that overleaps all bound, renovated India will take her proper ranks among the nations of the world, and be the master of the situation and of her own destiny."[116] Happy are they who see it in distant vision, happier those who are permitted to work and clear the way on to it, and happiest they who live to see it with their eyes and tread upon the holy soil once more.[117]

[109] Ranade: Congress and Conference.

[110] Ranade: The Telang School of Thought.

[111] Ranade: Ibid.

[112] Ranade: Address, Indian Social Conference, Lucknow, 1899.

[113] Ranade: Speech on the 24th Nov., 1900, quoted by Kellock: Op. cit., pp. 192-193.

[114] Ranade: Ibid, p. 193.

[115] Ranade: Address, Indian Social Conference, Lucknow, 1899.

[116] Ranade: Speech at the Social Conference, Calcutta, 1896.

[117] Ranade: Ibid.

NOTES & NEWS

COLLEGE OF TECHNOLOGY

COLLEGE-DAY CELEBRATIONS, 1942

THE second 'College-day' of the College of Technology came off early in January and if there was interruption of teaching work for nearly a week, there was the compensation of numerous festivities connected with the function. The main function on the first day was a brilliant affair as expected, attended by a large gathering of ladies and gentlemen, including the Chief-guest of honour, Dr. K. N. KATJU, the ex-minister of Industries and Finance, U. P., the Vice-Chancellor, the Pro-Vice-Chancellor and others.

The beautifully decorated "Get in" leading to the main pandal was really a magnificent piece of work speaking highly of the convener's artistic inclinations! Of course, the main pandal was not less decorated which in reality spoke of the festival!

At the outset, Principal Dr. GODBOLE welcomed Dr. KATJU and after the 'Vande Mataram', song he gave an account of the activity of the college. He gave out some statistical data about the Technological institutions in India and said that in spite of standing at the lowest end of the ladder in regard to the money grants, the college is doing its work vigourously. He then, referred to the high standard of training which the students get here in the college by mentioning the contemplated "who's who" of the past students, the majortiy of whom, are occupying high posts all over in industrial India, Burma and Ceylon.

After the Principal's inspiring address, Dr. KATJU in a long speech gave an idea about the application of cottage industries to further the place of India in the market of the world!

Mr. SRIVASTAVA then read out the annual report of the athletic society and Dr. Katju gave away the prizes to the winners of the college sports.

The day's function was rounded up with an important tea-party.

The next day, there was the variety entertainment programme by the students of the college and it was a complete

success. There were some good performances which were well rewarded by the presentation of prizes which were distributed by Mrs. GODBOLE.

The conveners of different committees who were responsible in making the function a success were the following :—

(1) Reception Committee—Mr. M. L. MISRA,

(2) Decoration Committee—Mr. A. N. GHOSH,

(3) Social Function Committee—Prof. K. C. TRIGUNAYAT,

and

(4) Variety Entertainment Committee—Dr. SHRIVASTAVA.

Our thanks are due to Dr. B.N. SINGH and Mr. S.L. KAPOOR for supplying the flowerpots and to the P.W.D. for the shamianas etc.

R. A. PETDAR, B.Sc. (Bombay),
Student, Soap Diploma Course,
Industrial Chemistry Department.

ACHARYA A. B. DHRUVA

In the demise of Acharya A. B. DHRUVA, Benares Hindu University loses one of its most valuable friends and esteemed workers. He came to the University in the early twenties as its Pro-Vice-Chancellor and Principal of Central Hindu College, which then comprised the faculties of Arts, Science and Technology. He was an able Sanskritist but no traditionalist. He combined in himself something of the old world intensity with a modern and what we call rational outlook. Well versed in Sanskrit literature and Hindu philosophy Dr. DHRUVA was well acquainted with English literature and its main trends. This enabled him to achieve a versatility not quite easy to find in these days of specialisation. Full of mother wit, he possessed a tolerant and broad outlook which enabled him to take a detached view of things. To us his loss is more intimate as he was the Editor of the *B. H. U. Magazine* which was our immediate predecessor. He was great as a scholar and educationist but greater in humanity which saved him from becoming the atrophied, high-browed, donnish prig which engulfs so many of those who have long association with academic life and installed in academic eminence. We mourn his loss and offer our condolences to his family for their grief is also ours.

PROF. P. SESHADRI

On April 19, 1942, Professor P. SESHADRI breathed his last at Ajmere, where he held the post of the Principal of the Government College. His death has deprived our country of one of the most distinguished educationists in India. Professor SESHADRI joined the Benares Hindu University in 1915 where he served as the Head of the Department of English. He was a member of the various academic bodies of this University, besides being a member of the Intermediate Board, U. P. He represented our country in the Educational Conferences abroad and he was a keen worker in the cause of education.

As a writer of English, Professor SESHADRI has to his credit quite a good number of articles, essays and he also wrote several poems and sonnets. He took very keen interest in the various activities of the students and was ever popular among them. He was the Editor of the *C.H.C. Magazine* for several years and raised its tone to a high level of excellence. Professor SESHADRI may be said to have died in harness inasmuch as only a few weeks before his death he wrote an article on "Education for Democrecy" which appeared in the *Indian Review* of Madras.

We greatly appreciate the many genuine services which Prof. SESHADRI rendared this University and we join the Professor's family in mourning his loss.

Volume 7 Numbers 2-3

JOURNAL OF THE BENARES HINDU UNIVERSITY

1943

CONTENTS

MODERN INDIAN RENAISSANCE AND "EASTERN RELIGIONS AND WESTERN THOUGHT"[1]

By Dr. BHAGAVAN DAS, M.A., D.Litt.

TOWARDS the close of 1940, a friend put into my hands, a few pages cut from the weekly *Picture Post* of London, for May, 1940. He wished me to read through an article, 'Unite or Perish', by H. G. Wells. I did so. I found it a splendid, impassioned, humanitarian, and at the same time very cogently and excellently argued, plea for a New World Order, a World Federation, which would ensure World Peace and save Mankind from periodical repetitions of such horrors as the World War, now raging since 1-9-1939, with ever-increasing fury and destructiveness, and dragging country after country within its sweep and whirl, month after month. The article ended with a 'Declaration of the *Rights* of Man', originally sketched by Mr. Wells, and then carefully considered, discussed, and revised by a Committee presided over by Lord Sankey, formerly Lord Chancellor of England for six years. This article of Mr. Wells and the Declaration of Rights, I have discussed at length in a chapter of my book, *World War and Its Only Cure—World Order and World Religion*, (published in December, 1941); and I have suggested, there, a supplement, in the shape of a 'Declaration of the *Duties* of Man (as Individual and as Society)', in the light of the *Principles* of the ancient Indian *Varṇa-Āshrama-Dharma*; which *Principles*, I am profoundly convinced, are the best foundation for such a New World Order as Mr. Wells and all philanthropists crave. Even so, I am further convinced, and have endeavoured to show in my book, a genuine British-Indian Commonwealth would be the best, the surest, and also the easiest and most practicable beginning of the New World Order and World Federation; easiest and most practicable, because all the conditions are already present, except only the prime one, 'change of heart' of the British Government. It is well known that Mr. Wells has been pleading for a New Social Structure of Humanity, since before the previous World War, of 1914-18, and after it, with ever greater earnestness and energy, in hundreds of speeches, articles, pamphlets

[1] The system of transliteration followed in this paper differs from the standard method especially in respect of the letters ट, ड, त and द, which are here represented by t, d, ṭ and ḍ respectively, the first two letters being given their ordinary English sound.

and books, in many ways and forms, in purposeful utopias as well as serious direct essays ; and, so far as known to me, with greater fervour, insistence, and persistence, than any other person of renown.

The relevancy of this introduction, seemingly unrelated to the subject indicated by the heading, will appear as we proceed.

After having read through Mr. Wells' article, I began idly turning over the other pages of the cuttings. The name 'Radhakrishnan', on one, caught my eyes. It occurred in an article with the caption : "Do we need a Spiritual Revival ?" by Edward Hulton. I read through the article eagerly ; and came across the following sentences, to my great joy : "*What are we fighting for ?* Let us praise H. G. Wells. He makes us think. He proposes a Federation of States, and Social Planning....His plan is good so far as it goes....But, Material Prosperity is not enough. We must turn to the Spirit [also]. This does not mean blind faith. Each must seek truth for himself. But we still need leaders...."

Then followed this remarkable passage : "Radhakrishnan, an Indian, whom, to our eternal honor, we elected to the new chair of Eastern Religions at Oxford, has recently produced his *Eastern Religions and Western Thought*. Most of us would do well to *sell all our books and get this one ;* for it is a guide book to the treasury of man's approach to truth down the ages.. It traces the history of philosophy. On the one hand is the scientific and humanistic mind, on the other the mystic mind.. (The West, since the Greeks, has turned more to the former). The Indian and other Eastern peoples have turned more to mysticism. (As Radhakrishnan says, on p. 63 of his book,) "Mysticism, which lays stress on the personal experience of God, direct contact with the creative spirit, is what Bergson calls *open religion*. The closed religions are the credal ritualistic ones, which give a sense of security to frightened children. Only an *open religion,* which requires us to enter the spiritual stream where our spirit can refresh and restore itself, can save humanity, which is lying half crushed by the weight of its own progress'.."

The article concludes with the following noteworthy sentences : "*Physical* force will be *valueless and useless* unless it is accompanied by a *Spiritual* message....Not only the Bible but the *Upanishads,* the holy books of India, are our common heritage. The great men have thought much alike, from Buddha to St. Thomas Aquinas. There exists a *Spiritual World State,* (which unites all). It is the uneducated who have grown *separate ;* though they are *subconsciously* yearning for union...."

Radhakrishnan's work sets forth, emphasises, expounds, illuminates these thoughts, making it clear that "physical force" is not only "valueless and useless," but most disastrous, "unless accompanied by a spiritual message", and guided and governed by it.

A copy of this work had come into my hands, a little earlier than the pages of the *Picture Post.* I was reading a few pages at a time, leisurely; and was taking unusually long over it. For two reasons. I was much preoccupied with the compilation of my book (above mentioned), on the same subject as Mr. Wells'; though from a different stand-point; with much greater attention to Indian problems; and keeping always in view the ancient Indian Organisation of the Human Race; which system has been growingly possessing my mind for the last forty years. Secondly, *Eastern Religions and Western Thought* is so full of splendid diction, of finely chiselled aphoristic sentences, apposite and illuminating quotations, from writings on different subjects, and belonging to many literatures of many ages and countries; that it is necessary to 'taste' many of the sentences slowly and wakefully, in order to get out of them the full savour and flavor of the thought embodied.

I managed to go through the whole book, carefully, and with ever-increasing pleasure, in the course of two or three months; and have, since then, been desirous to pay my tribute to it. But the fulfilment of this desire too has been delayed, by my heavy pre-occupation with the work on *World War and Its only cure—World Order and World Religion;* a subject which is not only of permanent importance for all human beings of any and every nation, race, religion; but is also exceedingly, intensely, urgent, at the present time; and needs that all thoughtful persons, who have the welfare of their fellow-beings, as well as their own, at heart, should occupy themselves with it closely. This delay has been an advantage, though, in one way. I have been opening Radhakrishnan's book again and again, here and there, at random, and reading paras and pages, repeatedly, for the sheer beauty of the language.

Having now completed my own book and enjoyed Radhakrishnan's fully, I feel I must not delay the tribute any longer. But, because no tribute can be richer than that given by Mr. Hulton; and others also, very competent judges, and far better qualified than I am to express their admiration in adequate English, have written in similarly enthusiastic terms; therefore my tribute shall consist largely in bringing together, for the Indian public, the eulogies written by Western thinkers. These

thinkers are specially quoted for two reasons. Long ago, Rāma was turned out of his home by a jealous stepmother; when he returned, fourteen years later, after having convinced another and very mighty race, of his prowess, he was welcomed home and enthroned with loving honor; and that honor, grown more and more into worship, with the lapse of the centuries, persists to this day. In our own day, as is well known, dear and deeply revered 'Thākur Ḍāḍā', Rabindranath Tagore, did not receive due recognition from his fellow-countrymen until he had won the Nobel Prize. Mahatma Gandhi was able to win the devotion of India with magical rapidity, because he had first demonstrated in South Africa, the value of his unprecedented methods of political struggle. For such reasons, I have gathered particularly, western appreciations of Sir S. Radhakrishnan's splendid work.[1]

[1] Here are some Western as well as Eastern tributes to that work in general:—

"When Sir S. Radhakrishnan speaks on Indian Philosophy or of the Hindu tradition, it is as if a freshening wind blew through those musty chambers whose walls are scored with sacred texts, whose air is thick with the dust of dogmas. The shutters are opened, and sun, air, and light stream into the room in whose corners has mouldered the spirit of the dead past"; thus writes Prof. C. E. M. Joad, author of several brightly and lucidly written books on Philosophy, Ethics, Politics, Religion, which have achieved great popularity.

Dr. Āṭréya, Professor of Philosophy and Psychology in the Benares University, has read widely in Indian as well as European philosophy and the 'new psychology'; done some research work in 'psycho-analysis'; has written a thoughtful book embodying the results of long study of the *Yoga-Vāsishtha*, a very large and very famous book of Védānṭa; and is one of the most promising of the new generation of Indian philosophers. In his presidential address to the Indian Philosophy section of the sixteenth Indian Philosophical Congress at Madras (1940), he says:

"Prof. S. Radhakrishnan has done greater service to the cause of Indian Philosophy than any other of India's sons in modern times,....because of his unique combination of deep spiritual insight, unparallelled power of expression in the language spoken and understood over a great part of the world, overmastering purpose and burning enthusiasm to win that place for the Indian religio-philosophical point of view in the current of the world's thought which it rightly deserves. He has been instrumental to a greater extent than anybody else, in 'taking Hindu thought again into the general stream of human thought'. Through his writings and lectures, voluminous and numerous, he has not only.. brought the East and the West nearer to each other, but has....boldly rebuked the West for its narrow, materialistic, unethical, and unspiritual outlook on life, which is the source of its present suffering and threatened destruction. He is India's best advocate in the West....By his magic touch, he has caused the almost dead bones of Indian lore to spring to new life".

"Professor Radhakrishnan has shown that in their perception of the goal, in the acuteness of their reasoning, and in the boldness of their conceptions, the Indian thinkers are second to none": (*Times Literary Supplement*).

Rabindranath Tagore wrote to him with reference to one of his early books: "..It has surpassed my expectation. The earnestness of your

The fol'owing very high appreciations of *Eastern Religions and Western Thought* in particular may be noted.

"It may well mark a turning point in Western Civilization. Certainly it should": (*Times Literary Supplement*). "A rare book of a rare mind": (*Oxford Magazine*). "An important and beautiful book written with earnest conviction and conspicuous ability. He makes his main point that we in Europe have much to learn, and more to unlearn, from India. We have neglected our opportunities during our long association with a civilisation much older and more mature than our own. It is not too late to remedy our fault": this is the opinion, recorded in the Magazine *Philosophy*, of the very aged and very

endeavour and your penetration have amazed me, and I am thankful to you for the literary grace of its language which is so beautifully *free from all technical jargon* and a *mere display of scholarship*."

Prof. Vergilius Ferm (of the College of Wooster, Ohio,U.S.A.) writes in his preface to *Religion in Transition*, which he has edited: "Were one to select two or three men, who, in a very conspicuous way, are trying to bring Eastern and Western thought into some kind of alliance, and who are trying to reinterpret Western thought to Easterners, and Eastern thought to Westerners, one would list the name of S. Radhakrishnan".

He was *invited* by the authorities concerned, *to preach from Christian pulpits*, in Oxford and Birmingham, in Manchester and Liverpool. What greater proof is possible of his quality of *spiritual missionary*? An Oxford daily, referring to a sermon by him, on *Evolution through Suffering*, wrote: "Though the Indian preacher had the marvellous power to weave a magic web of thought, imagination, and language, the real greatness of his sermon resides in some indefinable *spiritual* quality which arrests attention, moves the heart, and lifts us into an ampler air".

Sir Francis Younghusband, K.C.S.I., Lt.-Colonel, soldier, explorer, author, was born in India in 1863 ; was closely connected with Indians for the last 60 years nearly; marched into Lhassa at the head of an expeditionary force, by wish of the then Viceroy, Lord Curzon ; after that, apparently, underwent some great conversion of spirit ; and in his old age, was a very earnest and very prominent worker for the promotion of peace and religious understanding, and the establishment of a New World Order on a Spritual Basis, through the World Congress of Faiths, of which he was chairman till his death, in 1942. He wrote :

"As an interpreter of the philosophy and religion of India to the west, none excels Radhakrishnan. Himself a philosopher and man of deep religious feeling, he also possesses real eloquence. When he delivered his lectures on Buddha, in the 'Master Mind' series, to the British Academy, it was observed of him that he was himself a master mind. Before an audience of the leading men of letters and philosophers in the country, he was able, without a note and without a single hesitation, to deliver a discourse which enthralled the meeting, and brought not only Buddhism but Hinduism right home to us in England. More than that, by his keen clear intellect, by his obvious spirituality, and by his whole personality, he was able to make a lasting impression upon those who are best able to transmit it to those most fitted to receive it."

learned Dr. W. R. Inge, holder of high ecclesiastical office and honor in England as Dean of St. Paul's, popularly known as "the gloomy Dean", because of his pessimistic and caustic criticism of modern life and fearless dealing with the problems of the modern world, and himself author of standard and widely read works on mysticism and philosophy.

"It is a very important book; one of the most beautiful signs of the new dawn of a better aeon": (*Philosophia*).[1]

I had a pamphlet full of other encomiums, by British and American thinkers and literati, of Radhakrishnan's work generally, as well as of his other books specially. One was by the late Prof. Alexander, who is said to have almost started a new school of thought; others were by Bertrand Russell, Prof. J. S. Mackenzie, Prof. J. H. Muirhead and Principal L. P. Jacks, and also by American philosophers of note. They were very gratifying to an Indian admirer of Radhakrishnan; and were, besides, very interesting, as bringing out the different aspects of his work which had appealed to different minds. Admiration of his splendid language was common to them all. Unfortunately, the collection has been lost; otherwise, I would have incorporated many others of the eulogies here.

[1] Compare also :—"It is an arresting and even challenging book. Its main argument seems to stand by its own mass, and to form a challenge alike to a traditionalism which looks to events in the past, and to a modernism which looks to events in the future, instead of to the values which are eventless and timeless, as the ground of their faith": (Prof. J.H. Muirhead in the *Hibbert Journal*). "To the idea of a *World Religion* the writer has now given a *scripture* and a Bible. His feeling soul has been passing through painful anxiety, and here he prepares the ground for the sowing of the seed": (*Indian World*). "If this noble and in many places inspired work be read with a longing to explore the eternal spirit of truth, the earnest seeker will find much that he will be able to know in himself by direct inspiration": (J. J. Beresford in *Aryan Path*).

"In his capacity to attract by beauty of diction, by telling phraseology, by an appeal to our aesthetic nature, when he is reasoning with us, he is like Cardinal Newman. But Radhakrishnan has an advantage over Newman who was pleading for a sectarian and a narrow view of life. If we read Newman to-day, it is not because of his philosophy but for his literary worth. Radhakrishnan's books will be read more and more for the ideas and truths which they contain. Newman's writings are like photographs which fade, but Radhakrishnan's works are like paintings which endure. For all who are looking for the rising of the sun of a new day, his book will prove the sweet and mellowing light which refreshes the mind and energizes the body for the labours which await us all": (*The P. E. N.*). "We hope this book will receive the careful study of western theologians and missionaries to India": (*Congregational Quarterly*). "The author combines the functions of scholar, philosopher, and prophet, in an earnest purpose which displays itself throughout. The structure of the book is admirable": (*The Listener*).

Radhakrishnan's gift for sculpting sentences in English, which have the effect of Greek statuary, is astonishing. I remember reading, some years ago, in the *Hindustan Times* (New Delhi), an article in two instalments, by Lord Samuel. He is the President of the British Institute of Philosophy, and also a politician of note, with more rational and liberal views, regarding the claims of India, than those of the majority of the 'ruling classes' of Britain. He had collected, in the article, some scores of separate unconnected memorable sentences, culled from Radhakrishnan's writings. The public speeches of Radhakrishnan, reported in the papers, are always a great pleasure to read, for the same reason, and also for his valiant advocacy of the Cause of India's Freedom.

The head of Mother India, Mother of races, religions, civilisations, has been rolling, for some centuries now, in the mud and mire of serfdom ; mud and mire heaped up, and venerable head brought low, by her own later children, through their degeneracy in character, their separatist selfishness and exclusiveness grown excessive and blind, their internal dissensions, their grievous sins.

Radhakrishnan is one of those rare children of Mother India, to be counted on the fingers of the two hands, who have helped to lift that hoary head from the dust, within the past decades of the current Christian century ; by bringing the Indian People into World-Consciousness again, as something not altogether effete, moribund, decadent, despicable, fit only to be the servants of another people of a distant island, but as still possessed of vitality, of potency of new life, re-generation, re-birth.

"Whom the gods wish to destroy, they deprive of intelligence," and drive mad, whereby he destroys himself ; "whom they wish to protect and cherish and nourish, they endow with luminous wisdom," which enables them to ward off all evil and achieve all good. Thus declare two verses of that great storehouse of wisdom for the old, and of entertaining instruction for the young, the *Mahā-bhāraṭa*. To endow a whole nation with wisdom, is to give to it highly advanced peace-minded 'humanist' leader-souls. To deprive of intelligence and drive mad a whole people, is to bring it under the control of evil, excessively ambitious and selfish, haughty, cruel, war-minded, 'nationalist,' 'imperialist', 'mammonist' rulers and priests. The gods in the one case are the benevolent altruistic human affections ; in the other case the gods are 'gods inverted', therefore demons ; *demon est deus inversus ;* they are the excessively egoistic and malevolent human passions. The proof is there, plain before us—Europe

of the Scientists, whose wondrous discoveries and inventions, utilised virtuously by the honest and the hard-working, enriched human life and created the glories of modern western civilisation; and Europe of the Imperialist, Capitalist, Pseudo-Democratic Militarists, who are criminally misusing those inventions, and are destroying and threatening to annihilate all those glories, together with millions of innocent human lives and an incalculable amount of human happiness and of human energy and labor crudely represented by some thousand billions (milliards) of pounds sterling.

Surely the 'gods' wish to give help to helpless India, and, through her, to give another chance to the 'titans' of the west also. *Ex oriente lux.* After all, in the Purāṇic Mythos, the gods and the titans are step-brothers, and, when not at war, help, and even intermarry with, each other. The eastern and the western races of today are offspring of the same Root-Race. The east and the west need one another's *Spiritual* Science and *Material* science. India's *Spiritual* science needs the west's *Material* Science, which only can now brush off the dust and dirt of superstitions which have covered it up, and newly give to it substance, reality, vehicle of expression, scope for manifestation of its usefulness, through the new apparatus of a new civilisation; which only can help it to avoid remaining mere airy talk, and, worse, leading to corruptions, perversions, and degradations of all sorts, as it has been leading, for many centuries now. The west needs India's genuine *Spiritual* Science, as embodied in the *Upanishads*, the *Gītā*, the *Yoga-sūtras, rightly interpreted;* needs its essential teaching, *proved* by deep metaphysical thinking and by yogic spiritual disciplines, exercises, and experiments; the teaching, viz., of the Oneness of the Universal Self in and with all selves; of the consequent Solidarity of Man in a Universal Brotherhood of Humanity; of the unavoidable reactive consequences of virtuous co-operation and vicious snatching, in general prosperity and in general disruption, respectively; and of the possibility of 'extensions of faculty'; of the development of subtler 'psychical' powers by yoga-methods; which powers would bring peaceful joys, far more refined, heart-satisfying, intellect-filling than the delirious excitements which the sensual, land-grabbing, money-snatching, looting, plundering, butchering, 'martial' powers of the 'strong' produce.

The West needs this Spiritual teaching urgently, in order that its wonderful Material science may minister to universal human uplift and happiness, and help to establish the kingdom of heavenly righteousness on earth, instead of dragging man-

kind into the inferno of vast mutual slaughter and world-wide devastation, as it has been doing.

This is the one lesson that the best of the leaders—in Politics, in Ethics, in Art and Poetry and Literature, in Science, in Philosophy—who have been given by Providence to India, and who have made themselves recognised as world-figures, by the exceptional powers inhering in them, during the last few decades, have been trying to bring home to the heart of the Indian and the other Peoples of the earth, each in his own way.

Vivékānanḍa of Bengal, in the east of India, may be said to have been the first missionary, within the last 50 years, who carried her Spiritual Message to the West, and delivered it, first, at the Parliament of Religions, in Chicago, in 1893, and won from the famous philosopher of the U.S.A., William James, the description, "prince of monists". Very rightly feeling that theory ought to be connected with practice, he started the organisation of the Rāmakrishṇa Homes of Service, which are to be found now in many of the larger towns of India, doing more or less useful work. It is to be earnestly desired and hoped that the workers of the movement, will not allow the afflatus of *missionary fervour*, which Vivékānanḍa imparted to it, to depart from it; as, unhappily, such fervour always has a tendency to do, in the case of every new Influx of Spirit which initiates a fresh reform of Religion; witness the degeneration of *every* current religion; Christianity passing into Church-ianity; Buddhism becoming Lamaism; Mānava-Ḍharma becoming Brahminism; Islām becoming Mullā-ism.

Shortly after Vivékānanḍa, Rāma Ṭīrṭha, of Punjab, in the north, went to the west, on similar Spiritual Errand, and won great recognition; but was prevented by premature death, after return to India, from carrying the Védānṭa truth that was in him, into any definite practical work of helpfulness to daily human life.

Then Rabindranath Tagore arose, again in the east; was recognised by the world as a force for Good, on being crowned with the Nobel laurels; founded Shānṭi-Nikéṭan and Shri-Nikéṭan to serve as centres for a refreshed culture; and carried round the earth, the Spiritual Message of the *Kaviḥ Purāṇah*, the Eternal World-Poet-and-Playwright of the *Upanishaṭs*, in the language of literary artistry, in lyric song and drama, in story and essay.

Shortly after, there dawned in the west of India, the portentously auspicious figure of Mahāṭmā Gānḍhi, practical

mystic, genuine saint and shrewd politician in one; who has proclaimed that same Spiritual Message to India and to the world at large, in the language of extremely subtle ethics and too extremely moralised politics combined, by means of exemplary personal action, which has compelled the attention of all nations; language and action which compound, in a marvellously potent mixture, (1) the teachings of Buḍḍha, Jina, the more ancient Yoga-Ḍarshana, and the later Sermon on the Mount, regarding *Ahimsā* and *Satya*, Non-violence and Truthfulness, (2) of Krishṇa, regarding *Abhayam*, Fearlessness, and *Saṭṭva-samshuḍḍhi*, moral purification of vital energy and will-power, and battling against Evil unflinchingly, and (3) the old Indian way, of protest against all injustice, by the *harṭāl*, and its new Western form of the general strike—tools down and arms folded on the chest—carried over from the field of economics and industry to the contiguous field of politics. Mahāṭmā Gānḍhi's tireless labours have immensely strengthened the Congress organisation and multiplied the meshes of the network of its local committees and journalistic organs, which have carried his message to the most distant villages and even the jungle tribes , have poured new life into the Indian People, and have initiated new, and stimulated old but stagnating, useful public movements of many kinds. The very serious lack of carefully thought-out Plan and Programme of Swarāj and Social Organisation therein, and defects of extremist and lop-sided ethics, in his methods, which have been sterilising them all along-these, I have been endeavouring to point out, in the light of old Indian philosophy and psychology, since 1921, in the dailies, and have done so, more fully, in the book, *World War and Its Only Cure—World Order and World Religion.*[1]

Radhakrishnan has now arisen in the south, and, by all indications, belongs to the same spiritual line of great Indian leaders and great missioners of the Ancient Wisdom of the World; for he has been endowed by the Great Mystery, with a garment of the divine Vāg-Ḍévi, Sarasvaṭī, the holy goddess of the magic words of power, and wields that eloquence of speech and writing which wins delighted and earnest attention everywhere; and has also been touched, by that Mystery, with the vital power of one of Sarasvaṭī's vehicles, the Swan 'Ham-sa',

[1] I also made a fairly full statement of these lacks and defects, side by side with the great achievements, of those methods, in my paper, contributed by invitation, to the volume, *Mahatma Gandhi*, edited by Sir S. Radhakrishnan, and published in England, for presentation to Mahatma Gandhi, on 2-10-1939, when he entered into the seventieth year of his life. But my paper had to be abridged in England, to less than half its full length; because of exigencies of space; and, therefore, as printed, it does not present the pros and cons fully.

(Sah-Aham 'That am I'), which enables him to travel incessantly, by land, water, air, and carry those magic words everywhere, across wide oceans, to the most distant lands. The conviction that Radhakrishnan belongs to the same Spiritual line, and that he has more and even greater work to do than he has done so far—this conviction is strengthened by the autobiography of his psyche which he has contributed by request, to the collection of such autobiographies entitled *Religion in Transition*. His contribution is entitled, 'My Search for Truth'. It is all very simple-hearted yet very profoundly thoughtful; and builds up before the reader's eyes, the figure of a humble though most rarely endowed, modest yet self-confident, benevolent, open, and lovable nature. Here are a couple of sentences from it: "If with an unstable, sensitive, nature, and ordinary intellectual gifts, I have not yet made a mess of this life,....it is due to *good luck*....It is this that has protected me thus far....The major decisions of my life have been taken under a sort of *guidance*. I think, plan, and prepare, and yet when the choice is made, I have a feeling that an *invisible hand* has been *guiding* me for purposes other than my own." This sense of invisible guidance is common to all the great spiritual missionaries of the 'Wisdom'. The last pages of the contribution are a splendid commentary (not deliberately so intended, for the text is not referred to) on Manu's text, that 'he who be-friends all, like the Sun, Mittra, is named brāhmaṇa', (*maitro brāhmaṇa uchyaté*). The person who wrote those pages cannot but have the spirit of the true brāhmaṇa, (by worth, and not merely by birth), the philanthropic priest-*and*-prophet, in him. (Of course, the work of the brāhmaṇa has to be supplemented by the work of the kshaṭṭriya, who is *yāmya*, like Yama, the regulator, ruler, and ad-*just*-er). To this should be added that his very successful management of the Āndhra University for five years as its head, and now of the far larger Benares University for three years, as Vice-Chancellor, under difficult conditions of 'local politics', has shown that he is not simply a benevolent lover of books; but is also possessed of a shrewd understanding of the 'weaknesses' of men; of ability to get on with, and keep together, colleagues and subordinates of diverse temperaments and characters, to reconcile their conflicting interests, and to impress both sides with a sense of his justice and impartiality; and, finally, of power of quick and yet correct decision, and expeditious despatch of business; a rare combination of philosophical, literary, and executive capacities.

I would have placed the great name of Annie Besant first on the list, as the oldest of, and more 'comprehensive'

than, them all, who began earlier, her devotedly selfless and magnificent work, for the revival of the Spiritual side of life, in *intimate connection* with the Material side, in India particularly, and the world generally; for, (as she never tired of saying), the salvation of India, the junction station of all religions, all races, all cultures, of east and west, of ancient and modern, means the salvation of the world. For nearly forty years, she went travelling all over India, and to country after country all round the earth, tirelessly; revived, with unsurpassed eloquence of tongue and pen, respect for the Ancient Wisdom, and, thereby, newly awakened self-respect and solidarian consciousness in the Indian People; and preached to all the peoples of the earth, the Universal Brotherhood of Humanity and the Essential Unity of all Religions, which is the great Spiritual Message of India. Her practical application of the Truth, was the foundation of the Central Hindu College in Benares, other educational activities in the South of India, and, latterly, great work for the political uplift of India, for the sake of which she suffered internment in 1917. But I have not placed her name first, here, because some Indians, too much wedded to narrow ideas of race and nation, not yet realising that the Human Race is one, though it has many branches, and that Humanism is greater and far more important than Nationalism, though nations are a fact, and have to be recognised, but as subordinate to Humanity—because such Indians may not be willing to regard her as a child of Mother India; even though she emphatically and publicly adopted India as her Mother when she came over here for the first time, half a century ago.

Sir J. C. Bose, and the Nobel Laureate, Sir C. V. Raman, (the latter, only a few months younger than Radhakrishnan) have also won international fame and helped to win respect for India from the world. Their work has been more concerned with Physical Science than with Spiritual Wisdom; but that work too has not been without inspiration from, and touch of, that wisdom. Sir J. C. Bose especially has helped the cause of Spirituality, with western scientists, by bridging the gulf between 'the living and the non-living', with his experiments in 'response'.

In this latest book of his, Radhakrishnan has most worthily, in keeping with the spirit of India, provided that which is sadly lacking in the work of even those outstanding western thinkers, public workers, reformers, like H. G. Wells and Bertrand Russell, who are most anxious to see the past and present World Disorder replaced by a New World Order, but do not realise that an organism, in order to *live*, must have a soul, that a Civili-

sation in order to hold together and thrive, must have a Religion.[1]

One wishes to quote the whole of the Preface of *Eastern Religions and Western Thought*, to illustrate the inseparability of Civilisation and Religion. But we have to content ourselves with abridged extracts.

"The world has found itself as one body. But physical unity and economic interdependence are not by themselves sufficient to create a universal human community. For this we require a *human consciousness* of *community*. There has been a rapid extension of it after the" (previous world) "war. The modes and customs of all men are now part of the consciousness of all men. Man has become the spectator of man. A new humanism is on the horizon. This time it embraces the whole of mankind. Yet to our dismay we find that the world is anarchical. Its mind is in confusion. More than ever before, the world is today divided and afflicted by formidable evils. The present organisation of the world is inconsistent with the *Zeitgeist* shining on the distant horizon, as well as the true *spirit of Religion*. The obstacles to the *Organisation of Human Society in an International Commonwealth* are in the minds of men who have not developed the sense of Duty they owe to each other. The supreme task of our generation is to give a Soul to the growing World-Consciousness, *to develope ideals and institutions* necessary for the creative expression of the World-Soul, to transmit these loyalties and impulses to future generations and train them into world citizens. To this great work of creating a *new Pattern of Living*", (i.e. a New World Order, as is the phrase now greatly in vogue in the West), "some of the *fundamental insights* of the eastern *Religions*, especially Hinduism and Buddhism, seem to be *particularly relevant*, and an attempt is made in these lectures to indicate them. No culture, no country, lives or has the right to live for itself. If it has any contribution to make towards the enrichment of the human spirit, it owes that contribution to", (not forcible imposition upon), "the widest circle that it can reach."

The misfortune is that, as all history shows, the human being is so compounded of good and evil both, that cultures and countries do not learn to appreciate each other, and to 'give-and-take' rationally; until they have tried, and failed, to subjugate, suppress, even slaughter and exterminate, one

[1] Mr. Wells, in the latest, 1937, edition of his *Outline of History*, has at last recognised, and even strongly stressed, that "the coming *World State* will be based upon a common *World Religion*, very much simplified, universalised, better under-stood"; but he has nowhere, to my knowledge, tried to give to the public, any clear idea of what this World Religion is, to his mind.

another. Only after the valiant knights of the medieval times knock each other down, do they get up, admire, make friends, and shake hands with each other.

"The contributions of ancient Greece, of the Roman Empire, of Renaissance Italy, to the progress of humanity, do not concern only the inhabitants of modern Greece or modern Italy. They are part of the heritage of humanity. In the life of mind and spirit we cannot afford to display a mood of provincialism. At any rate, a mobilisation of the wisdom of the world may have some justification at a time when so many other forms of mobilisation are threatening it."

Accordingly, Radhakrishnan mobilises the Soul-Wisdom of the world with extraordinary success, and shows "that in the mystic traditions of the different religions we have a remarkable unity of spirit. The mystics are spiritual kinsmen. (They) always stood for the fellowship of humanity. As the Religion of Spirit, Mysticism avoids the two extremes of dogmatic affirmation and dogmatic denial. All signs indicate that it is likely to be the religion of the future."

The whole book is a study and exposition of Mysticism, from various standpoints, along many lines of thought, by contrast as well as consensus, by criticism and refutation of wrong views, e.g. of Schweitzer, and by recital and acceptance of the right views of scores of old and new thinkers, not only mystical philosophers, but also philosophical scientists, like Einstein.

"A study of the classic types of mystical experience discloses an astonishing agreement which is almost entirely independent of race, clime, or age." But "ultimate inward similarity of the human spirit does not mean absolute identity of mystical experience. There are individual variations. In the East, the mysticisms of the *Upanishads*, of the *Gītā*, of Shankara, of Rāmānuja, of Rāmakrishṇa, of Zen-Buddhism, of Jalāluddīn Rūmi, are different from one another. Similarly, in the West, the mysticisms of Plato and Paul, of Proclus and Tauler, Plotinus and Eckhart, differ from one another. The variations are not determined by race, climate, or geographical situation. They appear side by side within the same circle of race or culture, developing different tendencies and traditions": (p. 64).

The temptation is great to discuss the book at length; point out the graceful yet also powerful thoughts and phrases of each page; quote corresponding texts from old Samskrit books; and also indicate where further explanations, in footnotes, seem desirable, in the light of those books. The margins of my copy are full of red pencil lines and black ink notes. But

to develope and incorporate all these notes properly, would require a very large volume. I must content myself with something much briefer. It is to be hoped that younger, stronger, and abler persons will write such detailed 'studies' of the book. It, and the allied and equally valuable other book of Radhakrishnan's, *An Idealist View of Life*, should be put into the higher study-courses of every University.

The first chapter is entitled 'The World's Unborn Soul', and, after a rapid glance at the past cultures and philosophies of different countries and periods, comes to the conclusion that "Mankind is still in the making." But "a society can be remade only by changing men's hearts and minds.... Attempts to bring about human unity through mechanical means, through political adjustments, have proved abortive. It is not by these devices, at any rate not by them alone, that the unity of the human race can be accomplished. The destiny of the human race, as of the individual, depends on the directions of its life forces, the lights which guide it, and the laws which mould it." And because "however much we may desire to make all things new, we cannot get away from our roots in the old," therefore, "let us go for some distance into the past and trace the ideas which rule the present." (pp. 2-3).

Accordingly, Radhakrishnan unrolls before our eyes, the panorama of the religio-philosophical thought of East and West during the past fifty centuries, in its aspect of 'mysticism' particularly.

Holy Gangā rises in great clouds from the ocean to the sky ; takes rest in the Himalayas ; issues again from their glaciers ; flows in an ever broadening, but also ever less limpid, stream, gathering tributaries of all sorts, from varying soils, through fifteen hundred miles of northern India; fertilises the cis-montane plains ; gives birth to many towns ; bestows on them the virtues of life-giving, mind-purifying, body-cleansing waters ; and washes off and carries away their vices and their sins, day after day ; until, after wandering and meandering in a hundred small and large estuaries, in the swamps and jungles of the Sunderbans, swarming with wild swine and crocodiles and tigers, she finds rest again in the ocean from which she arose ; and rises, again and again, year after year, to perform, together with her sisters, her sacred mission of cleansing and vivifying the Indian human world perennially.

Even so, the great river of sacred, mystic, fervent, devout, yet also lucid, religio-philosophical thought of India takes its rise in the heart-searching, universe-exploring, primeval hymns of the *Véḍas*, and the intuitions, insights, visions, profound

utterances, of the *Upanishads*; flows on through five thousand years, receiving ever more numerous tributaries in the shape of brief or voluminous commentaries, gives birth to many canals, of the nature of different schools of thought, some of which do really helpful work, by vivifying and refreshing special forms of individual cultures and collective civilisations, (subordinated to the Humanist Culture and civilisation of *Varṇa-Āshrama-Ḍharma*); while other off-shoots stray away from good soil and get lost in arid deserts of sterile logomachy; until, in the later centuries, it passes out of touch with Human Life, becomes nearly lost in the morasses of barren academics and the thorny scrubs of noxious jargon, infested with ugly-shaped and evil-natured body-torturing and soul-vampirising superstitions; but again gathering its main stream together, in a great effort of its imperishable vitality of Essential Truth, is striving to head towards the exhaustless Ocean mirrored in the *Upanishads*, of the Omniscience of the all-pervading, all-embracing, all-upholding Self, Param-Āṭmā, out of which it arose originally, and has risen, and will arise, again and again, perennially.

In his monumental work, *Indian Philosophy*, (published, in two large volumes, in 1923 and 1927), Radhakrishnan takes the thoughtful serious-minded public, wishful to understand the *meaning of life*, thirsty for the sweet and wholesome waters of reason-based faith, voyaging down this great river of thought, in a new-shaped beautiful boat, built with the skill of western technique, and the materials of a western language.[1] That this

[1] Of this work, the *Journal of Philosophy* wrote: "Prof. Radhakrishnan has treated a great subject with admirable clarity and excellent judgment. He has given us an interpretation of Indian thought and aspiration that is vital, vivid, gripping. The appearence of Professor Radhakrishnan upon the philosophical horizon, together with such notable figures as J.C. Bose the botanist, P.C. Ray the chemist, Tagore the poet, and Gandhi the reformer, may be evidence of an intellectual awakening in India that will be compared with the Renaissance in Europe. It is an intriguing fancy that the day may come when the direction of student pilgrimages will be reversed, and from Europe and America searchers after truth will journey to Calcutta, Madras, or Rangoon, to learn from oriental masters, the new wisdom of the East."

The *Holborn Review* wrote of *Indian Philosophy*: "The present work is a profound and sympathetic study of the main course of Indian thought from the beginning. It sets forth the philosophic background of Indian religious social life with a fullness of knowledge and concreteness of detail that is perhaps unique. The book is one of deep and exact scholarship".

The *Quest* said: "Not a formal history and a dry intellectual discussion of ideas, but a work of feeling as well as of thought, an exposition of living interest."

The *Glasgow Herald* said: "The book marks an epoch in speculative thought. It is probably the first most important interpretation of the Eastern mind from within."

very large work, of 1500 pages, went into a second edition within two years of its first appearance, by itself proves the attractiveness of the manner in which it treats its serious subject.

"The new wisdom" (Foot note on p. 110) means 'the newly reborn Eternal Wisdom, re-em-bodied in the living languages of new races.' Unhappily for Mankind, the obdurate refusal of the British Government to shed imperialism, abandon the provocative name, 'the British Empire', and, instead, assume the benevolent name, and establish the beneficent fact, of 'British-Indian Commonwealth', which would have brought about an unbreakable alliance of East and West, and rapidly developed into a World-wide Federation of all nations, races, religions—most unhappily, this grievous failure has shattered, at least for a long time, the beautiful hopes of international East and West student-pilgrimages, built up by the 'intriguing fancy' of the writer in the *Journal of Philosophy* (f.n., *ibid.*). Instead of smiling student-pilgrimages, we have roaring army-invasions all over the world. Instead of exchanges of wisdom and science, we have exchanges of bombs, shells, torpedoes. Instead of World-wide Federation and Welfare-Promotion, we have World-wide War and Welfare-Destruction. Instead of healthy, wholesome, employment, for peace work, we have murderous *mis*-employment, for war work, of whole nations, hypnotised and made helpless. Shiva-Gaurī have been transformed into Rudra-Kālī by the calamitous workings of the lower mind of Britain, in defiance of all the admonitions of its higher mind. It should be, I trust it will be, for Radhakrishnan, and such fellow-workers as his thought-brillance and *tapas*-fervour may succeed in gathering round him, to help to strengthen that higher and better mind, not only of Britain but of all nations, after the lower and baser mind, not only of Britain but of all the belligerents, has surfeited itself with its present orgies: strengthen that higher mind by placing before it the fundamental teachings, of the Spiritual Wisdom, and as to *How* the Principles of that Wisdom can be *Applied* to Human Affairs, for their *better ordering* and administration.

The work which Radhakrishnan did for Indian Philosophy, in the earlier work, he has now done, with an even more practised, sure, artistic and effective touch, for the Philosophy and Religion of East and West both together, in *Eastern Religions and Western Thought* (published in 1939, just before the current World War broke out), and in its companion volume, *An Idealist View of Life*, (published earlier, in 1932).

In the later work, the first chapter is a masterly, though rapid, exposition of (1) the meaning of history; (2) the Greek

spirit of science and rationalism, of secular humanism and civic patriotism ; (3) the outstanding characteristics of medieval culture and Christian religion ; (4) the consequences of the European Renaissance, in philosophy, religion, and politics ; (5) the alarming (since then, converted, by the actual outbreak of the world war, into 'disastrous') features of our times, and the need for the emphasis of Eastern religions ; (6) the Hindu view of religion as spiritual experience, which is at the same time essentially rational and humanist ; and (7) the fact that mankind is still in the making.

The following quotations, with comments, will illustrate.

"(1)....Human history is a meaningful process....Man's progress is marked by a series of" (larger and larger) "integrations, by the formation of more and more comprehensive harmonies......He advances to a larger whole......." (2) ..."The Greeks were the first" (in Europe) "to make life rational, to ask *What is the Right Life of Man*....In Pythagoras and Plato, the Orphics and the Neo-Platonists, *mystic* elements were found, but....Pindar and Pericles, Thucydides and Socrates, who present the Greek genius at its best, with their visions of art and science, their conceptions of civic life and aspiration, were essentially humanist thinkers....Devotion to the City-State filled the spritual vacuum in the Greek consciousness....Plato, it is true, dreamed of an *Ideal Society*, but it was conceived as a City-State, not as a *Commonwealth of Mankind*. Greek civilisation came to an end mainly on account of its adherence to the *false* religion of *patriotism*.... Rome succeeded Greece....*Political* apotheosis removed the last shred of mystery," (i.e. reverent and constant recognition of the Great Mistery of the Universal Self behind all things), "from religion, and made it into a 'national anthem.' Such a religion could (a) neither *satisfy* the *immortal longings* of man, (b) nor supply the *spiritual unity* which could *bind* the *different provinces* of Rome....By the time the old tradition broke down the new current of Christianity had set in." (3) "The vital urge to the development of medieval culture....was derived from the Judaic-Christian conception of life. Christianity.... retaining the Jewish beliefs in a living God and passion for righteousness, absorbed Greek thought and Roman traditions. Its two chief contributions to European thought are an insistence on (a) the insufficiency of the intellectual, and (b) the importance of the historical. Hellenic thinkers had no conception of (a) *history* as a *purposive* process with a direction and a goal, but believed it to be (b) a *cyclic movement;* the Jews had faith in an *historical fulfilment*, the Messianic idea" (and the

millennium). "The Christian view represents a blend" (of the two). "In the works of St. Augustine, we find the struggle between the two conceptions. The transcendental reality of God, the One *Changeless* Being, above all the *Changes* and chances of life, is the central idea in his *Confessions.* The Jewish emphasis on the *historical,* and the Christian doctrine of *incarnation* are, *difficult to reconcile* with the *absolute* and non-historical character of the Godhead. *The problem still remains unsolved.*"

Radhakrishnan appends a valuable footnote here, which must be quoted, to show how the human mind works in the *same way* everywhere, as regards fundamental problems, side by side with endless *different ways* in surface-matters; also, secondarily, to give an instance of the extraordinarily wide sweep of Radhakrishnan's net, in the seas of the world's literatures. "A great Russian theologian, Nicholas Berdyaev, refers to this difficulty: 'According to the dogma of the Church and its prevailing philosophy, the possibility of a *movement* or of an historical process in the depths of Divine Life would appear to be incompatible with the Christian consciousness....But I am deeply convinced that the Christian doctrine of the *immobility* and inertia of God and the *Absolute,* and of the effectiveness of the historical principle only in the creative and *relative world that differs essentially from the Absolute,* is a purely exoteric and superficial doctrine. And it ignores what is most inward and mysterious, the exoteric truth implicit in the *doctrine of the divinity.* (*The Meaning of History,* Eng. tr., 1936, p. 47)."

"*The problem remains unsolved.*" It is the final Crux in Religious Philosophy or Philosophical Religion. If there is anything unsatisfactory in Radhakrishnan's books, it is this confession, that it remains unsolved. More on this point will be said later. Here I will only say in passing, that in the absence of explanatory context, I am unable to understand what exactly the Russian thinker means by "*the doctrine of the divinity*". It seems to me that if the words which I have underlined, viz., "that differs essentially from the Absolute," were duly interpreted, what now appears as a "purely exoteric and superficial doctrine," might begin to seem to conform greatly to *a-ḍvaiṭa* Vêḍânṭa. Vêḍânṭa, duly interpreted, *does solve* the crucial problem; so it seems to me, as I have tried to show in some of my books. But of course, what appears to be a proper interpretation to one person, and satisfies him, may, and does very often, appear quite unsatisfactory to another. Yet the very fact that the question persists, means that the effort to answer must, and does, persist also; and That which prompts

and puts the question, prompts and secures the answer toc. Radhakrishnan, (in a footnote at p. 22), quotes St. Gregory, "When a soul truly desires God, it already possesses him"; and Pascal: "Be comforted; thou wouldst not have sought Me unless thou hadst found Me." The *Upanishads* and other scriptures tell us: "Seek, and thou shall find", "knock, and the door will open", "*hṛdi Ayam, tasmāḍ hṛdayam*", "God, and therefore all, is in the heart; therefore search for the answer, in thine own heart."

"The doctrine of the State as a divine creation was supported by the apostles and the primitive Church....The scholastic movement prepared the way for a rationalist revival. The greatest minds had a perception of the inter-relations of (a) the divine and (b) the human. Dante tells us that Divine Providence has set before man *two ends;* (a) *blessedness of this life,*....and (b) *blessedness of eternal life*....Each needs the characteristic gifts and graces of the other. This recognition prepared the way for the belief in the *perfectibility* of *man* and *society.*"

It may be noted here that the *Vaishéshika-Sūṭras* declare expressly, that 'Ḍharma-Religion is that which leads to happiness *here* and *hereafter.*'

(4) "The Renaissance is the great age of disintegration and rebirth. Under the influence of the new movement, science started on its unfettered career. The sky changed with Copernicus, and the habitable world with the explorers. Scientific and technological achievements cast the world into a closely knit unity, and modern history slowly grew into the stature of world history."

The corollary is plain; 'national and nationalist societies' have to grow into, and merge in, a World Society; so that the meaning, the purpose, of the historical process may be realised. But, alas! and alas! the flock of Moses must wander for forty years after its first vision of the Land of Promise from the heights of Pisgah, before it will actually enter that land. Enormous travail must be undergone, all Humanity must be convulsed in untellable agonies—because of the Perversity of Duality, inherent in human nature, and in all Nature, 'God's Nature'—before the great birth of World Society, World Order, Organisation of the whole Human Race, Varṇa-Āshrama-Vyavasṭhā which will embrace the whole of Mankind within its benignant arms of universal *Social Justice;* arms very different from the malignant paws and claws of imperialist, capitalist, militarist, nationalist, autocratic, theocratic, timocratic, plutocratic, bureaucratic, despotic, dictatorial 'World Dominion' and *Social Injustice.*

In two compressed yet vivid and lucid paragraphs, Radhakrishnan shows how and why, through the powerful action of new ideas, "everywhere a tendency towards State absolutism has been growing", and "coercion becomes justified both within and without the State." "The *critical spirit* helps us to see the *relativism of all moral* codes. We refuse to be satisfied by mere statements about right and wrong, but ask for *reasons*. Conventions are said to be mere inhibitions, and habits an orthodoxy. A cold dissection of the deepest things men have lived by, ends in libertarian experiments in morals. Intellectual and artistic refinement places no check on brutal lusts and passions. The faith that the spread of *reason* will abolish all *irrational* outbursts has disappeared. Man tries to rule his conduct by means external to himself, by *technique*, and not *self-control*. Morality as an *individual regeneration*, an *inner transformation*, is not accepted. Under the democratic conception, the old *landed economy* of *feudalism* broke up; the *new money economy. economic individualism, modern industrialism*, developed"; and "to free the workers from their ignorance, isolation, poverty" more quickly, "a new programme of *abolishing capitalism*, which is said to be the root cause of all political and social evils, became more popular." Instead, came State absolutism and coercion. "*Humanism* is the religion of the majority of the intellectuals today." But "the long-starved powers of the soul reassert their claims and shift the foundations of our mind. *Psycho-analysis, authoritarian creeds, 'revivals'* overtake us, and we yield to them in the faith that something is better than nothing. The age is distracted between the cheap godless *naturalism* of the intellectuals and the crude *revivals* of the *fundamentalists*. As *Piety* in any real sense has been effectively destroyed for large numbers, the *National State* absorbs all their energies and emotions, *social, ethical,* and *religious*." And "the State, which is the most powerful organisation, is the least hampered by inner scruples or outer checks. Man in the community is at least half-civilised, but the State is still primitive, essentially a huge beast of prey. Nations have become mysterious symbols to whose protection we rally as savages to fetishes."[1]

[1]I should mention that I have been taking little liberties here and there, with the passages quoted. I have introduced under-lineations, capital letters, and words in brackets, for the purpose of inviting special attention to points to which reference may have to be made for comments, later on. I have also omitted words, now and then, from sentences, and have not marked the omission by the usual dots, to save the reader from a feeling of breaks and interruptions.

(5) "*We do not know what we want.* We are aware of the emptiness and profaneness of our life, but not of a *way of escape* from it. Some advise us" one way, others another. But "neither a *contented fatalism,* nor religious *expectancy* of a *Saviour* who alone can set right the disorder in the heart of things, nor *reversions* to the *past*, can give meaning to *a world which is in search of its soul.* Yet, in some way, the wisdom and spirit of all past forms enter into those which succeed them, and inspire the gradual evolution of *the purpose of history.* The present profound *malaise* is really a form of growing pains. The components are *all* there ; what is *lacking* is the" (new and larger) "*integration*, the *completeneness* which is *organic consciousness*....We need a rational faith to sustain a *New Order of life* and rescue us from our mental fag and spiritual anxiety," and also from our *material anarchy*. In other words, we need most urgently to know what we *should* want as the *true ends of life, purush-ārthas,* and also to have a new, thoroughly revised, and up-to-date *Varṇa-and-Āshrama-Vyavasthā*, i.e. a New World Order, inspired, en-soul-ed, guided, governed, by a New re-incarna-tion of the Eternal, universal, spirituo-material World Religion ; in living languages, in new counters of thought, new terms, familiar, dear, clear to the modern mind, in all its many and conflicting varieties. Such synthesis is possible, if at all, only in terms of psychology and philosophy; towards which the most advanced leaders in all the physical sciences are now turning; and the main elemental facts and laws of which may be regarded as largely undisputed.

(6) "Hinduism adopts a rationalist attitude in the matter of religion. (The essence of) Religion is Salvation. It is more a transforming *experience* than a *notion* of God. Belief and conduct, rites and ceremonies, authorities and dogma, are assigned a place subordinate to the art of conscious *Self-discovery* and contact with the divine. This distinctiveness of the Hindu religion was observed even by the (European) ancients. Philostratus puts in the mouth of Appollonius of Tyana, these words : 'All wish to live in the nearness of God, but only the Hindus bring it to pass'...."

Then follow some splendid pages of concentrated exposition, in modern terms, of the ancient Upanishadic Truths, brought home to the modern reader by select quotations, in footnotes, from western writers. "The transcedent self", (perhaps it would be well to distinguish it by a capital S), "stoops down as it were and touches the eyes of the empirical self, overwhelmed by the delusion of the world's work. When the individual withdraws his soul from all outward events,

gathers himself together inwardly, and strives with concentration, there breaks upon him an experience, secret, strange, wondrous, which quickens within him, lays hold on him, and becomes his very being." In other words, the individual self *recognises* and *feels*, in a lightning-flash, *sakṛt-prabhāṭam*, Its identity with the Universal Self which pervades and includes all individual selves; God begins to live *in* it, henceforth, and it, *in* God. "God is life. Recognition of this fact is *Spiritual Consciousness*....We are saved, not by creeds, but by gnosis, *jnāna*, spiritual wisdom. This is the result of the remaking of man," and, in turn, the cause of the further and better remaking of him. "An *austere life* turns knowledge into *wisdom*, a pandit into a *prophet*....To be spiritual is not to reject reason, but to go beyond it. *Philosophy* and *Religion* are two aspects of a *single* movement. The selfish ego (is) the deadliest foe of the soul. The greatest thinkers of the world unite in asking us to know the Self. Mencius declares: 'Who knows his own nature knows heaven." 'Tien,' Heaven, stands for God, in Chinese.

Muhammad, nine hundred years later, declares exactly the same thing; *Man arafa nafsahu faqaḍ arafa Rabbahu*, 'he who knows himself knows God'.

"St. Augustine writes: 'I, Lord, went wandering like a strayed sheep, seeking thee with anxious reasoning *without*, while thou wast *within* me. I sought for him *without* who was *within* myself'." The *Upanishads*, the *Gītā*, the Vēḍānṭins, Hindu and Muslim saints and sūfis of India, Persia, Arabia, all say exactly the same thing, in beautiful, heart-reaching, language. But, "we have to make a detour round the universe to get back to the self," (i.e., to the great Self; for the small self is all the time with us, too much so). One must lose, to find. "What is our true Self?....It is present in all, yet distinct from all....It is the *One* thing that remains constant and unchanged, in the incessant and *multiform* activity of the universe, *changes*, flux, fading of memories. It is Self-proven. Even he who denies it, presupposes it, in so far as he thinks. This *Universal Self* is, in our ordinary life, *obscured*, *confused* with the *empirical self*....*Māyā* does *not* mean that the empirical world, with the selves in it, is an *illusion*: for the whole effort of the cosmos is directed to and sustained by the *One Supreme Self*." All this is a fine rendering of the Vēḍānṭa; but the Crux, the Surd, reappears in it, and remains unreduced.

"The aim of all human living is Self-definition....(When) filled with a desire to escape from the world of discord and struggle, (if) we represent the Supreme as the *sovereign personality*

encompassing this whole world, if the *personal* concept is more prominent, (we) adopt (a) the mode of *bhakti* or *devotion* ; (otherwise), (b) the method of *jñāna* or *contemplation*, by which the Self, set free from all that is not self, regains its pure dignity.... Those who have the vision of perfection, strive continually for its fuller creative manifestation. For one who has the vision of the supreme, life, personality, and history become important. The life of God is the fullness of our life. The body is a necessity for the soul. He in whom the spark of spirit glows, grows into a new man, the man of God, the transfigured person. In the order of Nature, he keeps up his seperate individuality ; in the order of Spirit, the divine has taken hold of him, remoulding his personality. The pride of a self-conscious individual yields to the humility of a God-centred one....The *fundamental truths* of a *Spiritual Religion* are that our *real Self* is *the Supreme* being, which it is our duty to discover and consciously become ; and this being is *One in all*. The soul that has found itself is conscious of the *universal life*, of which *all* individuals, races, and nations are specified articulations.... Fellowship is life ; lack of fellowship, death. The secret *solidarity of the human race* we cannot escape from....Racialism and nationalism, which require us to exercise our baser passions, to bully and cheat, to kill and loot, all with a feeling that we are profoundly virtuous and doing God's work, are abhorrent to the spiritually awakened. They proclaim a *New Social Relationship* and serve a *New Society* with *civil liberties* for all individuals, and *political freedom* for all nations, great and small."

(7) "The collapse of a civilisation" like the present, "need not dishearten us....Whatever is valuable in it will enter into the *New World* which is struggling to be born. In spite of all appearances to the contrary, we discern, in the present unrest, the gradual dawning of a great light, a converging life-endeavour, a growing realisation that there is a secret Spirit in which we are all one and of which humanity is the highest vehicle on earth, and an increasing desire to live out this knowledge and establish a *Kingdom of Spirit on earth*."

In eloquent sentences, Radhakrishnan ends this first chapter with a great affirmation of infectious hope. "Science, common ideas, and reciprocal knowledge, progress of thought, and criticism," all are helping in their several ways. "We are able to see a little more clearly, that the truth of a religion is not what is singular and private to it, but *that* part of it which it is capable of sharing with all others. Humanity's ultimate realisation of itself and of the world can be attained only by an ever-increasing liberation of the *values* that are *universal*

and human. *Mankind is still in the making*....There is a hitherto undreamt of fullness, freedom, happiness, within reach of our species, if only we can pull ourselves together and go forward with a high *purpose* and a fine *resolve*. What we require is not *professions* and *programmes*, but the *power of spirit* in the hearts of men, a power which will help us to *discipline* our passions of greed and selfishness and *organise the world*, which is at one with us in desire."

When he deprecates professions and programmes, by 'professions' he presumably means only such 'professions' as *every one* of the belligerents in the current ghastly war, on both its sides, and particularly the 'democratic imperialist', (mocking contradiction in terms!), is making *ad nauseam*, professions of fighting for 'freedom', 'for the freedom of the world', 'for a better world', 'for co-prosperity', etc.; and by 'programmes' he presumably means only programmes for securing 'victory' over the enemy, and achieving world-dominion. Yet, perhaps, it would be better to read the sentence without the words, 'and programmes'. For, while 'fine resolve', 'power of spirit', 'discipline', the modern equivalent of *tapas*, are obviously indispensable; equally indispensable is *vidyā*, the modern equivalent of which, in the present reference, is a far-sighted, clear, comprehensive, rational *high purpose* and *scientific programme*, without which it will be impossible to *organise the world* in a *Commonwealth of Man*, and definitely and unmistakenly advance the great work of the 'making of Mankind'. All impartial thinkers recognise that, despite many grievous mistakes, in respect of the psychology of the human being and the philosophy of the meaning, purpose, values, ends, of Life, and despite many widespread crimes and cruelties in the treatment of large sections of the Russian people, in consequence of those mistakes; despite all this, the Russian Soviet *has* advanced the *rational* 'making of mankind', more than any other State of this day; and has done so, only because it has constantly directed its 'fine resolve' to better the lot of the masses, by a purposeful *Plan*, a *Programme*, of *how* to do so; which Plan and Programme, the Soviet has revised from time to time; in the light of the lessons learnt by it, from the frightful consequences of those mistakes. Radhakrishnan recognises this fully. In January, 1942, he put his valued signature to a public statement, by a number of public workers of India, in which they have expressed their admiration of the work done by the Soviet, for the amelioration of the condition of the Russian People at large, and the good and great example which they have set to other States. This statement has appeared in the

daily press. But the example (which needs some important modifications) is not yet being openly, gracefully, wisely, followed by the other nations; instead, only partially, distortedly, surreptitiously. It is being hindered by *a-vidyā;* which is not mere negative 'ignorance', but the positive 'ignoring', of the truth of the all-embracing Universal Self, the positive 'error' of excessively separatist individualism, egoism, caste-ism, creed-ism, nationalism, racialism.

The World War was necessary to break up that hindrance, and hasten the following of that example; also to compel the thoughtful and the powerful to correct the elements of psychological and philosophical error that still exist in it; because of which error, other peoples cannot yet put full faith in it; since all sections of the Russian People itself are not yet wholly satisfied and happy under it. On the other hand, by action and reaction, this distrust, and the aggressive war-mentality and war-preparations of the leaders and rulers, of the other Peoples, have compelled Russia to spend disproportionate energy on military counter-preparations, which have detracted from the worthiness of the example; through the fault, not of the Soviet, but of the other States; and have ultimately dragged Russia also into this war. Thus does the *anartha-param-parā* of *a-vidyā*, the chain of psychical and physical causes and effects, go on lengthening; each effect becomes a cause, each cause an effect, turn by turn, until the momentum is exhausted, the vicious cirсb breaks; in any given individual, nation, group of nations, a whole race.

We must take to heart, and live, in the hope, expressed in the closing sentences of the first chapter, that "Mankind is still in the making", will make itself (comparatively) perfect, after being made sadder and wiser by this war, and will organise the world in a Commonwealth of Man.

I have dealt at this great length with the first chapter of this splendid book, because, with the exception of the last, the others may be regarded as an extremely interesting and artistic elaboration of the ideas contained in it. The whole book must be read in its entirety.[1]

I will content myself, here, with stringing together striking sentences from each chapter, interpersing occasional comments, till I come to the last, with which I may deal a little more fully.

[1] As said before, my copy is full of notes in ink and marks in red pencil. I may add, for the benefit of the careless, that these are all done neatly, the red lines being drawn straight with a ruler; for the scrawlings and sprawlings with which unaesthetic readers disfigure their own, and, even more and worse, borrowed books, are hurtful, even hateful, to every lover of books. But it is impossible to make use of even a small portion of those notes here.

Ch. II is entitled, 'The Supreme Spiritual Ideal: the Hindu View.' "There is only one ideal for man, to make himself profoundly human, perfectly human. 'Be ye perfect.' The whole man is the divine man. The seeking for our highest and inmost Self is the seeking for God. *Self-discovery*, Self-knowledge, Self-fulfilment is *man's destiny*. ....The present crisis is due to lapse from the organic wholeness of life. The one problem is how to make the world safe for peace and humanity. This great country (Britain) is in two minds about that question. It is unable to decide between power politics and peace politics. It is possible to take a just view of the whole situation, and work for a constructive peace, when as yet there is no war to disturb and distract."[1] "*A-vidyā*, ignorance, is the source of our anguish; *vidyā*, *bodhi*, enlightenment, is our salvation. (Man) does not submit willingly to a *Rational Organisation of Society*. The tragedy is that we are not conscious of our ignorance. The more sick, the less sensible. A re-integration of human nature is the meaning of Salvation." Psycho-analysts glimpse a small part of this truth when they speak of the need for the *re-education* of the patient. "Religion is the conquest of fear, the antidote to failure and death. True freedom from fear can be reached only by *Jñāna* or Wisdom, the truth that casteth out fear. The way to growth lies through the *unifying* of *the self with a greater than the self*," (by means of yoga) "concentration, meditation, unification......A lightning flash throws a momentary but *eternal* gleam on *life in time*. A strange quietness enters the soul; a great peace pervades its being....*Eternal life* is *here* and *now*. The soul in solitude is the birthplace of religion." Suḍḍyo-jāṭa, 'sudden-born', Sakṛṭ-prabhāṭam, 'dawned at once, lighted up in a flash', are the Upanishad words. All great discoveries come like that.

"Now and again the criticism is brought against the Hindu ideal that it is not sufficiently ethical in character. The criticism has an obvious reference to the political failure of India despite her profession of exalted spiritual ideals. Partly justified, it amounts to this, that India did not, till recently, take to the cult of the nation. (But) aggresive nationalism lapses into imperialism. In the present crisis, Great Britain is not able to see clearly or act honestly on account of her imperial interests and ambitions. The world of independent sovereign nations with a mystic significance is in dissolution, and will soon be a past chapter in man's history, like the world of feudalism. Let us prefer to be human. All the

[1] This was written *before* the current war broke out.

same," (it must be admitted), "politically India has failed. If Great Britain, which represents the best of Europe, and India, which is the ultimate East, with their distinctive temperaments and traditions, can live together in a political system whose keynote is equality and friendship, and not dominion or subjection, it will be the greatest achievement of history." In other words, if a genuine British-Indian Commonwealth is established; but it is fast becoming 'too late,' as usual in Britain's dealings with India.

Ch. III treats of 'Mysticism and Ethics in Hindu thought', and affirms the close connection between the two.

"*Religion,* as a way of life, *is the seeking of the Eternal,*" (i.e., in the beginning; later on, it is *righteous living,* with an ever-present sense of contact with, or, indeed, identity with, the Eternal). "It is more behaviour than belief. If we believe in God, we must act in the light of that faith. Religion begins for us with an awareness that our Life, is not of ourselves alone. There is another, greater, life enfolding and sustaining us. To know oneself is to know all we can know and all we need to know. *Religion,* in the mystic sense, *is the concurrent activity of thought, feeling, and will.* It satisfies the logical demand for abiding certainty, the aesthetic longing for repose, and the ethical desire for perfection. In the great mystics, the *ṛshis* of the *Upanishads,*....holiness and learning, purity of soul, and penetration of understanding, are found in an harmonious whole." *Jñāna, Ichchhā, Kṛiyā,* are synthesised.

Radhakrishnan quotes Dr. Needham: "The doctrine of the communists may be described as the highest form which religion has yet taken. They alone have noted the Apostle's warning, 'He that despiseth man, despiseth not man but God.' Religion must die to be born again as the holy spirit of a *Righteous Social Order.*"

And he also quotes the concluding words of Sir George Birdwood's *Sva*; "*India may yet be destined to prepare the way for the reconciliation* of Christianity with the world, and, through the *practical* identification of the *spiritual* with the *temporal* life, to hasten the period,....when there will be no divisions of race, or creed, or nationality, between men, by whatsoever name they may be called, for they will be one in the acknowledgment of their common Brotherhood." Presumably, by 'practical identification', the writer means, identification in practice, in the practises, the actions, of the daily individual life and the collective or social life.

Radhakrishnan goes on to say, in his own words: "*Religion and humanism* do not exclude each other. They are, on the contrary, *organic to each other*. While the chief value of *religion* lies in its power to raise and enlarge the internal man, its soundness *is not complete until it has shaped properly his external existence*. For the latter, we require a *sound political, economic, and social life*"; in other words, a sound Social Organisation, a rational World Order; and this is just what the Essential Principles of the genuine Varṇa-Āshrama Dharma provide. "A spiritual view is sustained, not only by insight, but by a rational philosophy and *sound Social Institutions*."

Western critics have said that, "to the question why the Supreme Spirit makes individual souls and the world arise from itself, the Hindus have no better answer than that the whole thing is just a *play*, so it is impossible for them to attribute real importance to *ethics*." (No westeren critic or thinker has any better). "This brings us to the *problem* of the *relation* between the *Unchanging* Real and the *Changing* World."

This Crux is stated and, unhappily, *left unsolved*, (p. 90): "As to how the Primal Reality, in which the divine light shines everlastingly, can yet be the source and fount of all empirical being, why there should arise an Imperfect process of Becoming from a Being who is perfection itself, we can only say that it is a mystery, *Māyā*. If we still raise the question, our answers are bound to be riddled with difficulties." The many answers that have been given, are then stated pithily, in the words of Gauḍapāḍa; his own agreement seems accorded to the view that "the *world* is the profoundest expression of the divine nature, *is* of *the very Nature* of the Supreme Being; for what desire can he have, whose desires are (ever) fulfilled?" But obviously *the difficulty remains unsurmounted*. The Divine Nature, Purusha's Prakṛti, or Sva-bhāva, has to be described in words which will *reconcile* Change and Changeless, before the Gordian knot is loosened, is unravelled; not merely cut through with the word Māyā.

Radhakrishnan indicates, clearly and often, his recognition of the *distinction between Eternity and Time*; as do some of the other deep thinkers whom he cites in footnotes; but he and they seem not to make use of that distinction to solve the problem. In a passage full of striking phrases, he indicates the distinction in an ethical aspect, thus: "*Jnāna*, or seeing through the veil of Māyā, is the spiritual destiny of man. It is something more than ethical goodness, though it cannot be achieved without it. The *difference* is that between *perfection*

and *progress*, between *eternal* life and *temporal* development, between *time suspended* and *time extended*. One is an *improvement* of human nature, the other is a *re-orientation* of it. We *cannot* reach *perfection by means* of *progress*, any more than we can reach the *point* where the clouds touch the horizon by *running*."

As to the inseparability of 'turning away from sin' and 'turning towards the final truth,' he justly reaffirms the time-honored undisputed declaration of the *Upanishads*: "*Jñāna* cannot be achieved without ethical goodness. We can become perfect only by *overcoming selfishness*. The saint covers himself with the truth of the *Universal Self*." Even obviously, the soul which is identifying itself wholly with the egoistic separatist self, cannot feel its identity with the altruistic universalist Self—which latter feeling, of Universalism, is the essence of Mysticism. The *Ṛshis* were *practical* Mystic-Prophets.

"To know the truth, we must renounce the selfish interest. This is an ethical process. Truth cannot be perceived except by those who are in love with goodness. Wisdom is not won cheaply. The destiny of the *human soul* is to realise its *oneness with the Supreme*. Release is freedom from hampering egoism. Religion is not a flight from the world. It is here or nowhere. *Religious life* is a rhythm, of refreshment and restoration in the life of the Spirit, and of action with a *sense of mission* in the world. The abandonment of the ego is the identification with the fuller life and consciousness. The soul leaves behind its existence for itself alone, and becomes united with the spirit of the universe. The secret of the Cross is the crucifixion of the ego and the yielding to the will of God. The fusing of the finite and the infinite, of the surface consciousness and the ultimate depths, gives the sense of a new creation." The *Gītā* says that the man of wisdom devotes himself to the promotion of universal welfare".

"India is full of mendicant ascetics who wander from one part of the vast continent to the other, leaving the world around to its fate. These are not the true representatives of the genius of India." Radhakrishnan might have added that while a few of those are, no doubt, good and saintly devotees or *jñānis* or both, the great majority are the counterparts of the medieval monks and modern western tramps, apache, hoboes, hooligans, and also morons and idiots. "India has blundered in life, and failed to make the best of her resources." But so has the west, in a different way. "Do the East and the West happen to be what they are on account of the religions they profess?

(Is that) attributable to religion, or to a *betrayal* of it? Are they guided in their actual lives and public affairs by religious considerations? *Religion itself must be reborn.* The civilised man who operates a machine-gun and massacres unarmed women and children, is not, in moral nature, an improvement on the savage who raped and slew. Hate is spreading like a vast black cloud. Terror has become the technique of States. Fear is over the world. We protest too much our des re for peace, while preparing for war. It is like professing vegetarianism while running a butcher's shop. The individual spirit is the creator of world conditions. From within our natures comes all that will exalt or defile a man. Out of the heart are the issues of life. The world can be saved only if men and women develop a heart that will make it impossible for them to witness mutual slaughter with equanimity"; and also, at the same time, develope the head, the wisdom, which will enable them to "Organise the World" so as to ensure an *equitable* distribution of the world's goods, and *satisfy* justly the *egoistic* as well as the *altruistic* instincts and needs of man, both indefeasible. "The coming struggle" (which *has* come, on 1. 9. 1939) "is not so much between Fascism and Communism as between empires of material values supported by organised religions and provincial patriotism (on the one hand), and the sovereignty of spiritual ideals, (on the other). A reborn living faith in spiritual values is the deepest need of our lives"; as also is a reborn ideal of Socio-Individual Organisation, *twin* with those Spiritual Values; because the *deepest feeling that God is Love* and Love is God, the most all-embracing unselfishness and *wish to help*, the strongest *will to do the right thing, is not enough;* we must also *know what is the right thing to do, know how to help; God is Knowledge* and *Knowledge is God also,* as much as love. In the old words, *ṭapas* and *viḍyā,* both are indispensable.

The conclusive demonstration of the inseparableness of essential Mysticism and highest Ethics is to be found in the following passage (pp. 101-2): "At the end of his Indian tour, Dr. Paul Deussen said to a gathering at Bombay: 'The Gospels quite correctly established as the highest law of morality—Love your neighbour as yourselves. But *why* should I do so, since by the order of nature, I feel pain and pleasure only in myself, not in my neighbour? The answer is not in the Bible, but in the *Véḍa,* in the great formula, That art Thou, *Ṭat Ṭvam asi,* which gives in three words the combined sum of Metaphysics and Morals. You shall love your neighbour as yourself *because* you are your neighbour.' When one realises

that all beings are but the self, (Self), one acts, not selfishly, but for all beings."[1]

Chapter IV deals particularly with Greek religious thought in comparison with Indian. "The West is passing through a new Renaissance." The earlier was due to "the revelation of the classical culture of Greece and Rome; there is a sudden growth of the spirit today, effected by the new inheritance of Asia. East and West have come together, and can no more part. The special nearness is preparing the way for spiritual approximation. The thought and experience of one-half of humanity cannot be neglected without peril. To correct the narrowness resulting from a one-sided and exclusive pre-occupation with either Eastern or Western thought, to fortify our inner life with the dignity of a more perfect and universal experience, an understanding of each other's cultures is essential. Every spiritual or scientific advance which any branch of the human family achieves, is achieved, not for itself alone, but for all mankind. Besides, there is no power possessed by any race of men, that is not possessed in some measure by all. The *difference* is one of *degree*. The *mysticism* of ancient India or the *rationalism* of modern Europe is only a fuller development of something which belongs to man. We are in an age when *cultures are in fusion*. To penetrate to the heart of a civilisation, we ought to *study its religious ideals*. *Religion* has been, from the beginning, the *bearer of human culture*. It is the supreme achievement of man's profound experience."

Then Radhakrishnan proceeds "to refer to the mystic tendencies in the two streams, of Eastern and Western thought, to indicate their affinity of type, to argue that mystical aspiration is a genuine part of human nature and assumes the same general forms wherever it is developed." And this 'referring,

[1] Aldous Huxley, in *Jesting Pilate*, Pt.II, 'Malaya–At Sea,' writes: "In these seas, and to one fresh from India and Indian 'spirituality,' Indian dirt and religion, Ford seems a greater man than Buddha. In Europe, on the other hand, and still more, no doubt, in America, the way of Gautama has all the appearance of the way of Salvation. One is all for religion until one visits a really religious country. There, one is all for drains, machinery, and the minimum wage. To travel is to discover that everybody is wrong. The philosophies, the civilisations, which seem, at a distance, so superior to those at home, all prove, on a closer inspection, to be, in their own way, just as hopelessly imperfect. That knowledge which only travel can give, is worth, it seems to me all the trouble and expense of a circumnavigation."

In short, *mens sana in corpore sano*. We want both, clean mind *and* clean body, 'happiness here *as well as* happiness hereafter; eastern 'spirituality' *and* western 'materiality', philosophic moral religion and *also* physical science and scientifically regulated moral sense-joys, *pra-jñāna* and *vi-jñāna*; *ḍhyāna* and also *ḍesh-ātana* on *yāṭrā*. Manu tells us how this want can be fulfilled.

indicating, arguing' is done in the rest of the chapter, with an opulence of accurate learning, a terseness of style, and an abundance of apt quotations from all sorts of writers, scholars, poets, theologians, philosophers, scientists, of many countries, which are a continual delight to the careful reader. The 'affinity of type,' the identity of thought and emotional feeling, beneath the surface differences of language and forms, is established completely. But, with the delight is mixed the very saddening reflection that, while some of the most thoughtful and observant men of other countries have studied, understood, deeply appreciated, and highly valued and honoured the true 'heart' of India, as is evidenced by the out-of-the-way, generally unknown, surprising quotations; the majority of the 'educated' new offspring of the old Motherland, fail altogether to do so; and, in their wrathful revolt, which is no doubt righteous, against the *stultifying and degrading superstitions with which the essential philosophy has become encrusted, are endeavouring* to do, what is equally certainly, very wrongful and very senseless, viz., *to sweep away*, together *with the rubbish, the gems* covered up and hidden by it; and are not sifting out and treasuring carefully those gems.

The work that is done, in Ch. IV, for the thought of the Grecian, Roman, and earlier civilisations such as Egyptian, Minoan, Babylonian, Assyrian, Zoroastrian, and others, in comparison with the thought of the Vẹdic and Upanishaḍic Indian civilisation, including brief characterisations of the very old Indus-valley civilisation of Mohan-jo-daro and Harappa—that work is done in Chs. V and VI for Christian thought, with the same wealth of detail, overflowing, yet also astonishingly compressed and compacted. Scores of famous authors are passed in review, and many scores of books are laid under contribution for choice extracts. I must content myself with a few random quotations.

"Jesus protested vehemently against the Jew's exaggerated devotion to ceremonial details. To the Jew, the important question is, What am I to *do*? To the Eastern religions and mystery cults, the more important question is, What am I to *be*?" (The Ṛshis teach: '*Be* a Universalist, *and do also, accordingly*).

The Jew here obviously means the *ordinary* Jew; and what is true of such, is true of 'the young mind' in the fold of any and every religion. Such 'young-minded' Hindus, Muslims, Christians, Buddhists, Zoroastrians, all are travellers on the same road of *Karma-kānda,* ritualism, as the 'young-minded' Jew. The young live in and by action; the old, in and by

thought. Restlessness for the young; rest and repose for the old. Strife, struggle, competition, for the young; peace, conciliation, for the old. The young live in expectation; the old, in memory. The young look forward to the future; the old look back to the past. Tomorrow for the young; yesterday for the old. The Eternal Now for those who have seen That which is neither young nor old, Sanaṭ-Kumāra.

Some very great mystics have borne the designation of Jew, and the *Kabbala* is one of the world's classics of Mysticism. Radhakrishnan does ample justice to both. *Karma-mārga, bhakṭi-mārga, jñāna-mārga,* ("via purgativa, via contemplativa, via unitiva," in different aspects, mentioned at pp. 48, 237, 241, of Radhakrishnan's book), are all completely reconciled in the Indian original *Varṇa-Āshrama-Vyavasṭhā*, the Code of Socio-Individual Life, by the simple yet most powerful, wise, effective, method of *assigning to each, an appropriate time-place-circumstance,* with due regulation.

"It was one of the great moments of history, when Alexander celebrated his great dream of the marriage of Europe and Asia....(in practical form, by marrying) Roxana, a princess from Bactria, and Statira, the daughter of Darius, and, at the famous banquet at Susa, prayed for a union of hearts, *homonoia,* and a joint *commonwealth* of Macedonians and Persians, (and) envisaged a Brotherhood of Man in which there should be neither Greek nor barbarian. Zeno responded to the appeal of Alexander, and in his *Republic,* set forth the vision of a world which should no longer be separate States but one great city under one divine law, where all were citizens and members one of another, bound together not (so much) by human laws but (more, or as,) by their own voluntary adhesion. This great hope has never quite left us, though we seem to be as far away from it as in the 3rd century B.C," (p. 154). Because of the grievous failure and sins of the British Government principally—it should be added. That Government was given a splendid opportunity by Providence, of establishing a Commonwealth of Britons and Indians, but has been stubbornly and foolishly throwing it away, time after time, to its own as well India's and the whole world's great harm.

"If religion is the outcome of the human mind, it would be strange if we did not find coincidences" between religions; and still more strange, we may add, if it, and they, be the outcome of the Divine Mind. Such coincidences, resemblances, parallels, identities, in respect of 'temptations', 'miracles,' 'life-events,' 'experience,' 'teachings,' are pointed out in the book, page after page.

In a casual footnote, (I do not mention the page; the reader must discover it, if he cares to do so, by reading the whole book), Radhakrishnan makes the vivid observation, "The influence of Indian thought is not so much a model to be copied, as a dye which permeates."

Ch. VII, with the caption, 'Greece, Palestine, and India,' describes some outstanding characteristics of Western civilisation, which distinguish it from the Hindu and the Chinese; deals historically with the Græco-Roman influence on the West and the strain of scepticism imparted by it; then with the Jewish strain of dogmatism and its development; and finally with the influence of the Indian mystical tradition on Christianity.

Optimism, but with reservations and warnings, is the note struck at the outset. "Man has not grown worse. In some points he is an improvement on his predecessors. But we need not exult....The *final test* of every system is the happiness and *well-being* of men and women. Those who live for economic power and for the State are not concerned with the development of *a true quality of life* for the people, and are obliged to adopt war as a national industry. The world is a moral invalid (today) surrounded by quacks and charlatans. The patient requires drastic treatment. Ultimate reality cannot be destroyed. Moral laws cannot be mocked. We have not developed the (necessary) *spiritual equipment* to face facts and initiate policies based on truth and tolerance. The alternatives are, either a policy of *righteousness and a just reorganisation of the world*, or an armed world. That is the issue before us." The issue has been decided now, for the time being, in favour of an armed and savagely murderous dis-organisation of the world. "Extension in space is not necessarily a growth in spirit. In order to live, we have *lost the reason for living*. Civilisation is not worth saving if it continues on its present foundations. *Western races* crave for freedom even at the price of conflict; *eastern* cling to peace even at the price of subjection. The eastern civilisations are by no means self-sufficient. They seem to be chaotic, helpless, incapable of pulling themselves together and forging ahead. Their peoples, impractical and inefficient, are wandering in their own lands, lost and half-alive. They suffer from weaknesses which are the symptoms of old age, if not senility. Their present listless and disorganised condition is not due to their love of peace and humanity, but to their failure to pay the price for defending them."

Obviously, those last remarks apply principally to India; and not at all to Japan. Japan has been compelled to adopt,

at least in her political life, the same type of civilisation as Britain, Germany, U.S.A., France, Russia, Italy, and has improved upon her teachers; compelled by the aggressiveness of the western nations. China too now, since 1912, and more particularly since 1937, has been proving to the world that she craves for 'freedom' in the first place, and peace in the second. And the soldiers of both Japan and China have been showing an utter contempt of death that is not known to the soldiers of any other nation, western or eastern; the papers do not mention any soldiers of either as taken 'prisoner'.

"East and West are both moving out of their historical past towards *a way of thinking* which shall eventually be shared in *common* by all mankind, even as material appliances are. Further growth in the old moulds is not possible. We need today *a proper orientation*, literally the values of the world derived from the *Orient, the truths of inner life. They are as essential for human life as outer organisation.*"

This is a key sentence. Therefore let me emphasise it, by repeating it in various forms. *Outer organisation is as essential for human life as the truths of Inner life. The body needs the soul; the soul needs the body; just as much.* Mere spirituality is meaningless, is impossible; mere materiality is meaningless, is impossible; both are necessary; equally. The *Golden Rule of Conduct;* enunciated, in spiritual succession, century after century, country after country, by Manu, Vyasa, Krishna, Zoroaster, Buddha, Confucius, Christ, Muhammad; is impossible to follow rightly, without the setting, the *technique*, of a Rational Social Organisation, something like that prescribed by Manu; and the best and most *Rational Social Organisation* is impossible to work, without the inspiration of the Spirit of the Golden Rule, the Oneness of all selves in the Universal Self.

"The fate of the human race hangs on a rapid assimilation of the qualities associated with the *mystic religions* of the East. Today the whole world is in fusion, and all is in motion. East and West are fertilising each other, not for the first time. May we not strive for a *Philosophy* which will *combine* the best of *European Humanism* and *Asiatic Religion*, a Philosophy profounder and more living than either, endowed with greater spiritual and ethical force, *which will conquer the hearts of men and compel peoples to acknowledge its sway.*"

"A religion ceases to be *universal faith* if it does not make *universal men.* Science cannot minister to the needs of the soul; dogmatism cannot meet the needs of the intellect. We

require a *religion* which is *both scientific and humanistic.* Religion, science, and humanism were sisters in ancient India; they were allies in Greece. If God is not found in each soul, he is unfindable. Today, Mysticism has a deep appeal to the spiritual-minded. It takes its stand on verifiable truth. It is in opposition to all tendencies which put authority above truth, and nation above humanity. It protests passionat ly against abuses of organised religions. It is there, latent in the depths of the world's subconciousness. It is coming, and is well below the horizon. Religion is born in agony. The death of the rebellious ego is the condition of the birth of the Son of God. If there are no *crucifixions*, there will be no *resurrections*."

Therefore the whole human world is being crucified, internecinely, through this World War, by the Great Mystery, in order that it may be resurrected, in a World Federation, in a New World Order, animated, inspired, guided, governed by a World Religion, which will be Scientific, Philosophical, Humanistic, Mystic. What is the Great Mystery? Radhakrishnan has a sentence which glimpses it: "*Time* is the Moving Image of *Eternity*; Experience is the *Appear*-ance of the Absolute"; (capitals and hyphen, mine); i. e. is the Illusion of the *Motion*-picture, the Temporal Succession, of what is an Eternal and Infinite *Motionless* picture. Describing the views of Plotinus, he writes (p. 210), "The universal Nous....is pure thought.... in the region of eternity,.... the *archetype* of the whole visible world, of all that was or is or will be existent in it....All things are *together* in it, not only undivided by position in space, but *without* reference to *process in time*....*Eternity* belongs to Nous, as *time* belongs to soul." In the *together*-ness is the Crux.

Near the end of the chapter we have a useful footnote. "I may warn the western reader against much that passes for Indian wisdom in Europe and America. The *highest mysticism* of India is *throughly rational*, and is associated with a profoundly philosophical culture; it has nothing in common with esoteric quackeries"—such as too many 'professional' *sādhus*, *sanyāsis*, *yogis*, employ, to deceive and swindle the gullibles, who are too ready to be gulled, because of their own blindly selfish wishes for worldly benefits, to be conferred on them by the 'mysterious and occult powers' of these quacks and charlatans, if they are propitiated with gifts. In the false hope of gaining more, these gullibles lose even what they already have. But all this does not mean that *real yoga-siddhi-s* are impossible, are a myth and chimera.

Almost the last sentence of the text of the chapter is this: "If, *before it is too late*, India's legitimate hopes and just aspira-

tions receive their fulfilment, her influence on the British Commonwealth and the world at large will be exerted towards the development of *a higher quality of life* in the individual, and the establishment of a *World Commonwealth, based on the ideals of* the Spirit".

Chapter VIII is headed, 'The Meeting of Religions', and indicates India as the place of the meeting. It brings into relief the hospitality of the Hindu mind; outlines the history of the beginnings and the spread of Hinduism; shows that the Hindu attitude is the result, not of sceptisism or of expediency, but of the faith that spiritual experience is the essence of religion; advances further arguments in favour of this attitude; shows the value of tradition for religious growth; and discusses the merits and demerits of the Hindu method of religious reform. It also deals with the effects of the Hindu spirit on Islam and on Christianity.

"The different religions have now come together. They must develop a spirit of (mutual) comprehension which will bind them together as varied expressions of a single truth. Such a spirit (has) characterised the development of Hinduism for nearly fifty centuries. The *past strength* and continuity of *Hindu culture,* as well as its *present weakness and disorder,* are problems of equal interest;" and importance, the latter problem of even greater importance, we may add. "Hinduism is an inheritance of thought and inspiration to which every race in India has made its distinctive contribution." Many testimonies are adduced, of foreign visitors in the past, to the tolerant attitude of the Hindus. "As a result of it, Hinduism has become a mosaic of almost all the types and stages of religious aspiration and endeavour. It has adapted itself with infinite grace to every human need, and it has not shrunk from the acceptance of every aspect of God conceived by man, and yet *preserved its unity* by interpreting the different historical forms as modes, emanations, or *aspects* of the *Supreme.*"

To which we must, with deep sorrow, add that, at the same time, it has managed, with infinite gracelessness and disastrous shortsightedness, to *create virulent disunity in the social,* economic, and political *life* of the people, by interpreting, what are only the typical *aspects* of *Man,* as being *radically different species,* by mere *heredity;* breaking up the solidarity of the people into over two thousand mutually 'untouchable' castes, sub-castes, sub-sub-castes, promoting selfish exclusivenesses and antipathies between them; changing the meaning of *varṇa* from 'occupation', 'profession', 'vocation', 'means of

living', into *jāti, zāt*, 'gens', 'ancestry', 'heredity', 'tribe', 'clan'; and, thereby, turning the supernal blessing of an utterly rational, spiritual, psychologically scientific '*vocational-class*-system' into the infernal curse of a rigidly '*hereditary-caste*-system'.

"Friendly understanding is not inconsistent with deep feeling and thought"; rather, one may say, it grows out of only deep thought and feeling. To slightly modify the western proverb, 'Only he who knows all, can forgive all'. But of course, 'to forgive all' is not, by any means, 'to imitate all', or to refrain from the performance of the duty of pointing out, according to time-place-circumstance, the right from the wrong, as one understands it, and the duty of condemning the latter, (and even punishing the wrong-doer, it may be), and advising the former.

"Toleration is the homage which the finite mind pays to the inexhaustibility of the Infinite"; i.e., toleration of other forms of *vichāra*, thought, belief, and of such acts as do not injuriously affect others; not toleration of anti-social *āchāra*, conduct, which is against the public interest, in given circumstances.

"Symbolism is an essential part of human life"; no doubt, as mud-toys and rag-dolls are, but during childhood only; or as mathematical figures and formulæ are, to be used, not worshipped. To cling to dolls throughout life, means the condition of the moron, the idiot. The growing human being, the growing race, should be diligently helped by the elders to grow out of them. And difference must be made between good symbols and bad symbols. There is too much phallus-worship, too much monster-image-worship, too much animal sacrifice, among Hindus; too little self-sacrifice, too little beautiful statue-and-portrait-appreciation having eugenic value, too little intelligent use of good mind-elevating and knowledge-concentrating symbols, with clear understanding of their purpose and meanings.

Radhakrishnan himself recognises, and states briefly but sufficiently, vigorously, trenchantly, the *demerits* and *evil consequences*, as well as the merits, of the Hindu way of religious adaptation and reform.

"The triumphs of this method of religious reform have been striking; no less are its failures. After these many centuries, Hinduism, like the curate's egg, is good only in parts. It is admirable and abhorrent, saintly and savage, beautifully wise and dangerously silly, generous beyound measure and mean beyond example".

Treating of the influence of Hinduism on Islam, Radhakrishnan quotes Islamic testimony to the identity between Vēdānta and Sūfism. But that identity has latterly been

largely forgotten. The consequence is that "the conflicts between Hindus and Muslims, which have become more frequent in recent times, fill one with shame and grief. Political and economic considerations are mixed up with religious questions. The new Indian Constitution has added to the tension. The bid for souls and the scramble for posts are getting confused".

Incidentally, on p. 336, almost every sentence is a *sūkṭi*, fine thought enshrined in fine phrase. Near the end of the chapter, we have the exhortation that, to save "a restless and disordered world" from destroying itself, we should not "waver in our determination that the whole of humanity shall remain a united people, where Muslim and Christian, Buddhist and Hindu, shall stand together, bound by common devotion to a greater dream of a *World Society* with a *Universal Religion* of which the historical faiths are but branches."

We come now to the last Chapter, IX, headed "The Individual and the Social Order in Hinduism." All the book is exceptionally *fine*, yet this last chapter is, to my mind, the most *important*; it may be said to deal with that 'end' to which all that has preceded is a 'means.' It is the most useful, the most valuable, for 'practical' purposes. It opens with a brilliant statement of the rival 'conceits', claims of superiority, 'missions,' of "Napoleonic France,....Imperialistic Britain,.... Soviet Russia....Nordic Germany....Indians....Chinese.... Japanese."

The *element of good* in all these 'missions' and 'destinies,' is the idea of the *unification* of the human world; the *element of all-vitiating evil*, in most, is the idea that that unification can and should be brought about by the forcible *political domination* of that one race or nation over all the rest, and for the benefit of that one race or nation.

But, "if we are to find a *solution* for the differences which divide races and nations, today, it must be through the *recognition* of the *essential oneness* of the modern world, *spiritually* and *socially*, as well as *economically* and *politically*."

Then Radhakrishnan begins the second section of the chapter with the observation that: "In dealing with any *social organisation* we must enquire into the *essential ideas* on which it is *founded*, the *conception of life* which inspires it, and the *forms* which these ideas of life assume."

The reader may feel that a link is lacking, to connect this with the preceding section. Towards the end of it, the observation is made that "The present state of the world is largely

conditioned by the *philosophies of life* that had been worked out by them," i. e., by "the developments, prior to 500 B.C.,.... of the prophetic school in Israel, of Confucianism, of Brahminism and Buddhism." But "the present state of the world," as is patent, and as the book declares also, repeatedly, is due to the *misuse* of *science* and the *decay* of the influence of those *religious* "developments." Probably what Radhakrishnan had in mind was some such thing as this, which I may perhaps venture to suggest to the reader in my own words, as an introduction to the second section, establishing connection and continuity with the preceding, viz., 'We have made it clear, we trust, that the human world can be saved from chaos by the establishment of a *World Society inspired by Universal Religion*. We have also made it clear that the essence of the Universal Religion must be the Mysticism which runs as a core through all the great historical religions. We have mentioned the slightly different forms which that Mysticism puts on within the fold of each of these different religions: and have also indicated that the recognition of a Universal Self and the voluntary submission of the individual ego to that Self, in thought, feeling, and will, is the essence of that essence. It now remains to indicate what should be, or might be, or are likely to be, the fundamental ideals and conceptions of life, and the institutions in which those ideals can find realisation, of a World Society or World Order thus inspired by World Religion; in other words, what are the outlines of a model Social Organisation, a Pattern of Living, Individual and Social. The Hindu Social Organisation, inseparable from the Hindu Religion, is a living, though very diseased, form of such Social Organisation. Let us study it, to find out if it has any features which might be usefully taken up by our dreamt-of and hoped-for World Society. In dealing with any Social Organisation, we must enquire into the *essential ideas*, etc."

And in some thirty-five pages, Radhakrishnan puts before the reader, an outline of the significance of the three main quartettes of the Hindu Scheme. I use the word Hindu with some qualms; but it has come to stay; so it has to be used. As Radhakrishnan has pointed out, it is derived from the word Sindhu; whence, Hindu of the Persians and Indus and India of the Greeks; it properly means 'Indian,' but has acquired a denominational significance, by distinction from 'Muslim'; though Indian Muslims are called 'Hindi', i.e. Indian, in the countries of the near *west* of India (i.e., the 'near *east*' of Europe). It would be better, if, for indicating religious persuasion, the word 'Vaidika' could be used; but that word has lost its true

etymological meaning, viz., 'scientific, rational, knowing' (from *vid*, to know, Lat. *video*, Eng. wit, wise); and now has its own associations of objectionable exclusivenesses. Still better would be the word Mānava; but that word, by itself, means 'man'; only as adjective to Dharma, does it mean 'Manu's Law-Religion' and also 'the Religion of all Hamanity'. We have therefore to make the best we can of the word 'Hindu'.

The three quartettes that Radhakrishnan deals with, are (1) the four *purush-arthas*, objects, ends, aims, values, of life, (2) the four *varnas*, 'orders,' and (3) the four *āshramas*, successive stages of life. He uses the word 'orders' here, instead of the usual 'castes,' to avoid the 'hereditary' bias now attached to that unfortunate word, which originally and etymologically meant 'pure,' 'chaste;' or 'classes', 'vocational classes,' which I personally prefer, as it brings out the true significance best. But he also uses the word 'classes' too, later on.

He has dealt with the subject and discussed these three tetrads in the last of the four lectures comprised in an earlier book, *The Hindu View of Life*. That treatment is briefer, but should not be regarded as superseded by the later. It puts forward many useful reflections which are not repeated in the later. The two supplement one another. But, naturally, the later treatment is more mature, and it condemns more clearly and strongly, the exaggeration of the notion of 'caste by birth only' as the main cause of degeneration. I am not aware of any other writing of Radhakrishnan's on this subject.

He treats the three quartettes, in *Eastern Religions and Western Thought*, with his unfailing talent for compressed and felicitous description of salient features. The second and third tetrads are superficially known to all: not the first, even superficially. Some of the deeper significance of them is expounded in the book. I need make only a few quotations.

"*Dharma* tells that while our life is, in the first instance, for our own satisfaction, it is more essentially for the community, and most of all for that *Universal Self* which is in each of us and all beings. Ethical life is the means to *spiritual freedom* as well as *its expression on earth.*"

The other ends of life, *Artha*, "wealth and material well-being, "*Kāma*, the "emotional life," and *Moksha*, "spiritual freedom," "universality," are briefly characterised. "*Varna-dharma* deals with the duties assigned to men's position in society as determined by their *character* and *function*; *āshrama dharma*, with the duties relevant to the stage of life, youth,

manhood, or old age...The fourfold scheme is democratic; it insists on the *spiritual equality* of all men; it makes for individuality, (as) attained, not through an escape from limitations, but through the willing acceptance of obligations; it points out that all work is socially useful and equally important; (it says that) social justice is not a scheme of rights, but of opportunities. It is wrong to assume that democracy requires all men to be alike."

"When birth acquired greater importance, *classes degenerated* into 'castes.' In the period of the Vedic hymns, 1500 to 600 B.C., there were classes, and not castes. While there are *only four classes*, the *castes* are *innumerable*. The *substitution* of the principle of *birth*, for virtue and valour, has been the *main* factor in the process of social crystallisation and caste *separatism*. The son of the Brahmin is always a Brahmin, though he may have nothing of the Brahmin in him. The true Brahmin is one who has sensed the deepest self (the Universal Self) and acts out of that consciousness."

It is all fine, very fine. Yet I am discontented, very discontented! Radhakrishnan has done me the honour to refer to my humble and all too feeble pioneer work in this behalf in a foot note.[1] Because of this, and because of my great admiration for him, and finally, because of the 'right and title,' (flouted now in the west, since the old there have ceased to behave as the old should; but not yet quite in the east, for the ancient wise way has not yet been wholly given up, here, of retiring from the competitive life, in proper time, at the beginning of old age, and giving to the new generation its due turn)—because of the 'right' to make suggestions, which the 'accident' of some twenty years' seniority in age gives to me, I make bold to say that, magnificent as is the work he has done so far, I am not content! I want, and the public needs, much more from him. His *magnum opus* has yet to be written. He has only drawn a very good ground-plan, in the last chapter. He has also laid a strong foundation in the preceding portion of the book. But there is one weakness in the foundation which needs to be remedied; and the superstructure, which he has only just begun, needs much more work, to be completed.

What is the weakness of the foundation? I have referred to the Crux, "the central problem," the ultimate question of Metaphysic, which is fully stated on p. 90 of the book, and is referred to again on pp. 241 and 242. It is raised plainly, or

By the way, the book which he refers to as *Hindu Social Organisation*, is named *The Science of Social Organisation, or the Laws of Manu*.

indicated indirectly, over and over again, in *An Idealist View of Life;* (f.i., at pp. 110,257,310,344). But in neither book is a determined effort made to solve it. Instead, it is surrendered to, expressly, in the earlier book (p. 344). "As to why,... we can only say that it is much too difficult for us in the pit to know what is happening behind the screens. It is Māyā, or a mystery which we have to accept reverently...Though the *creation* of the world is an *incident* in the never-ending *activity* of the *Absolute,* it satisfies a *deep want* in God. The World is as indispensable to God as God is to the world." This weakness, this flaw in the foundation, which may increase into a dangerous crack, this loophole through which endless doubts might creep in, has to be mended. The ancient seers have raised the Crucial Problem and have pointed towards the solution; but in *veiled* language; perhaps to tantalise, and thereby to sharpen the thirst, and stimulate to greater effort, and strengthen and make more acute the power of true and penetrating vision.

Pari-pūrṇasya kā spṛhā?; the Ever-Full, Ever-Complete, Perfect—what *deep want,* what lack, *any,* can It have? *Nishkriyé ṭu kriyā kaṭham?*; how creation, action, motion, change, in the Action-less, Motionless, Changeless? *Aham (eva) Na (Maṭṭo) Anyaṭ*; I (alone) Not (any) Other. *Maṭ-ṭah Para-ṭaram Nā-(A)nyaṭ (Gīṭā).* The secret is hidden in these three words, I-Other-Not; though to say so appears absurd. I have endeavoured to explain this in two books.

Why worry so much over the solution of this puzzle? What harm to the rest of the 'practical' work of life, if it is left unsolved? Why not rest satisfied with the words 'Ultimate Mystery'? The answer is: For the same reason for which human beings have worried, ever since history began, over the existence of God, and over any and every other question of philosophy and religion. Until all questions are solved, none is solved. One weak link makes the whole chain weak. If there is one error, the whole calculation goes wrong. The only peace is indivisible universal peace. The only security is collective security. If we confess insolubility at the end, we might as well begin with it, and save vast trouble. The very persistency, the very importunacy, with which the puzzle, the final Crux, arises, age after age, in country after country, in thoughtful and sensitive mind after mind, *proves* that it *needs* solution, unavoidably, and *can* be solved, and also *has been* solved, time after time. The answer is always to be found where the question is found, in the heart. '*Hṛḍi Ayam, ṭasmāḍ hṛḍayam*; it is in the heart.' The two are twins, though one keeps in hiding, and has to be searched for through a great labyrinth of thoughts

and feelings, suppositions and rejections, trials and errors, and even sins and heavy expiations; and, when found, goes into hiding again, promptly!–for *Līlā* Play, world-Drama.

As Radhakrishnan has shown amply, throughout the book, the absence of *Spirit*-ual foundation is the sole cause of the vast cracking and crumbling of modern western civilisation. Obviously that foundation should be provided, if a stable civilisation is desired; and equally obviously, the foundation should not be left with a serious flaw in it. Otherwise, the existence of the Spirit, the recognition of which al-one ('All-One') leads to true Spirit-uality, unselfishness, might begin to be doubted, the whole great labour wasted, all the work to do over again. If we try to remain content with the word 'Mystery' we shall fail. That word will begin again, some day, to be distorted by Mater-iality, self-ishness, to mean 'Chance,' 'Arbitrary Lawlessness in Nature,' and lead mankind again into the Moloch arms of the over-ambushing Arch-Enemy of Spirit-uality, viz., Mater-ialist Sensualism, whence religious and political wars and communal riots; 'eat, drink, and be merry, at the cost of your neighbour, while you have a Chance, for to-morrow we die; and after us, the deluge; who cares!' Or 'Mystery' may be understood to mean 'a *personal* and omnipotent God, with intense tribal and racial partialities and hostilities, who will *always* be with *me* and *my nation*, and against all others; which others have been created by another Mystery named Satan; therefore let *me* and *my nation* war on, and subjugate, and reduce to slavery, all these other nations'! The true meaning of I, Me, My, Sva, Self, is not realised. The false meaning only of it is clung to, might and main. Hence, disaster.

As is very rightly said in *An Idealist View of Life* (pp. 92,99,154), "the order of nature is a dependable unity because the self (Self) is itself a unity,...the *universal Self* which the individual feels as his own,..the universal Self *in us*." But unless we make quite sure of what exactly is the *relation* between the selves and the Self, between the Changing and the Changeless, the Temporal and the Eternal, the Finite and the Infinite, the Many and the One, Nature and Nature's God—unless we do this, our certainty about the Unity of an *all-ordering Self*, which Unity makes the *Order* of Nature a dependable unity, will always be very shaky and liable to periodical upsettals, and to replacements by the uncertainties of pluralistic and complete *Disorder*.

The true meaning of Moksha, *Freedom-Salvation-Rest*, and the nature of the ceaseless universal Motion, within which and

by which we seem *bound*, *Baḍḍha*, must be understood clearly and satisfyingly; by at least the most trusted and trustworthy teachers, guides, leaders, elders, rulers, of humanity, *brahm-arshis* and *rāj-arshis* of the time; for they cannot be understood, at the present stage of human evolution, and will not be, for long ages yet, by the great masses of humanity. Thus only will the other *purush-ārṭhas*, ends, values, interests of life, be soberly, moderately, wholesomely achieved, each in due season and degree, each in due balance and proportion with the others, by the juniors, the followers, the ruled, the masses. Without such understanding of the 'Nature' of the *ever-wheeling* universe, *within* the *never-moving* 'God of Nature,' the four ends of life will not be correctly understood, not be seen to be rational and just.

Also, though the periphery of the foundation, its outer walls, and its solid bottom, (with the exception of the serious flaw above-mentioned), have been strongly built in Radhakrishnan's books, with the concrete and cement of Spiritual Mysticism ; some more cross-walls and partitions need to be added, in that foundation itself, partitions built with the material of *psychological* laws and facts ; in order to enable the desiderated many-roomed, commodious, all-accommodating, and also handsome super-structure to be raised correctly. The three quartettes dealt with, together with other important tetrads, require to be based firmly on such additional cross-walls, of many other inportant tetrads, in the foundation itself.

The outstanding distinction of the book under review and of its companion volume is, that philosophy and religion are kept constantly in touch with human life ; and the beneficial or pernicious influence of their different forms on the latter, are pointed out on every occasion. The words underlined (by me) in the preceding quotations indicate how the *connection between the religious philosophy of life* and *actual life* is never absent from the author's mind, in the later book.

It is worth while to repeat some of the significant words : "Organisation of human society in an international commonwealth," "creating a new pattern of living" (p. viii) ; "commonwealth of mankind" (p. 7) ; "a new order of life" (19) ; "the new world which is struggling to be born," "organise the world," (33) ; "rational organisation of society" (43) ; "righteous social order (73) ; "sound political, economic, and social life," "sound social institutions" (76) ; "just reorganisation of the world" (254) ; "the truths of inner life are as essential for human happiness as outer organisation" (259) ; "world commonwealth"

(305); "The whole of humanity a united people....a world society with a universal religion" (347).

This *intimate relating of actual practical life* to *philosophical theory of life*, is, if possible, even more persistent in the earlier book. This is proved by such expressions, scattered all over it, as those: "Social Organisation" (p. 35); "organisation, not only internal but external," "perfection of the world," "we cannot become self-sufficient until the world is so" (210, 211); "perfect freedom is impossible in an imperfect world," "those who have secured a vision of Spirit, work in the world so long as there is wrong to be set right," "the ideal individual and the perfect community arise together," (in other words, *āshrama-dharma* and *varṇa-dharma* are as warp and woof); "new social order based on justice and creative love (46); "the driving force of Bolshevism is faith, mysticism, and willingness to sacrifice unto death," "socialist idea of universal brotherhood" (47); "a life of happiness is possible only on the basis of knowledge and science," (science material as well as spiritual, in other words, Vēḍa and Vēḍānṭa) (48); "India wants today, social betterment which will transform the mass of people, who are ill-fed, ill-clothed, ill-housed, into a free community of well-regulated families, living, not in luxury, but in moderate comfort, with no fierce or unhealthy competition" (49); "harmonious inter-relation of all individuals" (62); "well-balanced system of human relationships" (63); "socialism cannot remove selfishness" (but, it should be added. 'can and should *regulate* it,' which is very important to bear in mind) (68); "we are acutely conscious of the present disorder and are anxious to remould society to a better plan" (191); "some men are so vitally constructive that they are able to organise anew the society in which they live according to their vision" (202); "organisation is not only internal but external," "we cannot become self-sufficient until the world is so," "life more abundant (for the individual) is possible only with the perfection of the world" (210, 211).

This most important thought is kept in mind by Radhakrishnan in his other writings also. Thus in his paper, *My Search after Truth*, referred to before, he says: "Religion must express itself in reasonable thought, fruitful action, and *right social institutions*"; "the civilisation of India is an effort to *embody philosophical wisdom in social life*" (and, it must be kept in mind, the ancient Indian "philosophical wisdom" is metaphysical, psychological, and *scientific Religion*); "modern attempts to *transform society*, so that hope and happiness might be brought within reach of the needy and down-trodden are not inconsistent

with the *Hindu religion*, but are *demanded* by it" ; "let us by all means establish a just economic order, (but) let me note that the economic man is not the whole man" ; "so long as India is a dependency and not a dominion, Great Britain cannot complain if Italy and Germany wish to take their share in the white man's burden," "things are never settled until they are settled rightly ; it is time we restore the supremacy of law and *organise the world* for an enduring *peace*" ; "no *individual* is really saved until society is perfected ;" and so on.

In the preface to the first volume of *Indian Philosophy*, he says that "a characteristic feature of many of the views discussed in this volume is that they are motived not so much by the logical impulse to account for the riddles of existence, as by the *practical need* of a support in life." He also speaks there of "the close *connexion between religion and philosophy* in early Indian speculation," and says that "the predominantly theoretical interest gets the upper hand in the *darshanas* or systems of philosophy, though the intimate connexion between *knowledge* and *life* is not lost sight of." But he admits that "the charge of unprogressiveness or stationariness holds when we reach the stage after the first great commentators."

He might well have said more plainly, that the later works of the 'new' (*navya*) Védānta (Metaphysic), Nyāya (Logic), Mimāmsā (Ethic, Exegetic, and Jurisprudence), and even Vyākaraṇa (Grammar), are over-full of barren logic-chopping, tiresomely smart hair-splitting, verbal juggling, intellectual acrobatics, heavy pedantry. If there is any usefulness in them at all, it is that they make the clever student's mind more nimble, supple, strong ; even as physical gymnastics, the muscles. Quite often, on the other hand, if the student is dull, they overstrain and injure the mind. In the previous case, they mostly end in a mere conceit of cleverness and argumentative cantankerousness ; in the second, in a permanent fuddle-and-muddle-headedness. In either case, there is immense waste of time and energy which might have been much better employed in acquiring much more useful knowledge of various kinds, available, to discriminate care, within the orbit of even purely Samskṛt learning, to say nothing of modern sciences.

This perverse development of philosophy, in the direction of arid logomachy and mystifying jargon, is far from absent in even the modern scientific west. One small instance will suffice. Some two years ago, I happened to pick up a volume of the well-known Home University Library, entitled *Recent Philosophy*, by John Laird, (pub. 1936). I glanced through

the Introduction. It was brightly written. I proceeded to read the rest. I found the brightness marred more and more frequently, as the pages went past, by sudden emergences of strange, dark, even fearful, words. I began to note these down on the fly-leaves. At the end, the number of those ending in 'ism', amounted to one hundred and twenty-one, each different from the others. And I had probably missed jotting down some others. What does the reader think of 'heuristicism', 'aporeticism', 'synechism', 'tychism', 'eidetic phenomenologism', 'absolutistic normative ethicalism', 'noodicism', 'logistical positivism', 'subjective transubjectivism', *and* 'glottologicalism', *and* 'gignomenologism'! Besides the 'isms', there were some equally amazing 'ologies' and 'ogonies', f.i., 'axiology', 'psychomegathology', and 'heterogony'. The Samskrt *vāda* is an exact equivalent of 'ism' and 'ology'; can be tacked on to any word; and has been, to many scores; yielding as many formidable words, which have neither earthly nor heavenly use. On no page of Laird's book was there any mention of any connection between any of these astonishing words and views, supposed to be 'philosophy', and human welfare and social structure; except one, on which there was a passing reference to Marx's 'dialectical materialism' and the now famous 'isms', Nazism, Fascism, and Communism. Rabindranath Tagore, in his appreciation, quoted before, has, with poet's insight, rightly stressed Radhakrishnan's freedom "from all technical jargon and a mere display of scholarship."

As Radhakrishnan says, "Philosophy, which was once the pursuit of wisdom," (for satisfaction of heart, and tranquility of soul, and guidance in daily life, of oneself and of others), "has become a technique"; in other words, a profession, like the Church and Religion, or the Army, or the Stage. "To mistake it (Philosophy) for an intellectual discipline, which deals with highly abstract concepts, is to make it irrelevent to life....If the philosophers of today are not so influential as they used to be, it is.....due to the fact that they are specialising in abstruse problems beyond the comprehension of the layman"; (*An I.V. of Life*, p. 182); 'and, like lawyers, physicians, artists, etc., in creating baneful jargon', it may be added.

How are the "highly abstract concepts" and the incomprehensibly "abstruse problems" born? Thus. In every profession, especially in the present conditions of all-pervading conflict, there is acute competition; 'two of a trade cannot agree'; therefore, in philosophy also, 'a professor is a person who is of a different opinion', and there is a craze, a rivalry, a race, for the invention of new '*words*' which will have the glamour of sub-

tlety of abstract concept, and of profundity of abstruse problem, in their 'aura'; and which will thereby prove the wonderful originality and miraculous intelligence or super-mind of the inventor—'I have discovered something which no one else had ever thought of before, or can even understand', 'my goods are better than those of any other, are exclusive, are of a special class, they outclass all others', 'my explosive is more destructive than any other discovered by the enemy's scientists.' Of course, some technical terms, within due limits, are necessary for every science and fine and useful art, like tools.

It is all the work of the individualist spirit run amuck, in philosophy and religion too, as in other departments of life. Not that differences of view are wholly absent from the available ancient writings. There is the well-known verse of the *Mahā-bhārata, N-āsau munir yasya matam na bhinnam*, of which the definition of 'a professor', above quoted, is almost a literal equivalent. Yet, there is a general *consensus*, among the ancients, that the differences of 'view' are due only to differences of 'view-point', and that all the views are, in various ways, *supplementary* to one another. The usual way of the *rshis* is, 'Thus have I heard from the elders', 'I am only a transmitter and interpreter'. The *Gītā's* 'active' philosophy is expressly declared by Krshna, to be *param-parā-prāpta*, 'traditional'. Unfortunately, that way also degenerates, into blind traditionalism and prostration before a book. Hence the task of world-mending is unending.

I hope and believe that it is the high mission of Radhakrishnan to help in the great work of a fresh and greater, finer, more stable, more lasting 'world-mending', to justify anew, the fact, which the west also believes in, as is evidenced by the ancient Latin saying, *Ex Oriente Lux*, 'Light comes from the East', Light Spiritual as well as Light Physical.

The modern world has blundered into the hell of enormous war, a war on all the continents, in and on all the seas, in all the airs, simultaneously, on a scale wholly unknown to all known past history or even legend and epic. The Rāmāyaṇa and Mahā-bhārata wars, together, amount to perhaps a twentieth of the World War now raging. The modern world has so blundered, because it extinguished, in its heart, the Light Spiritual, and plunged itself in the Darkness Sensual. It has begun to grope again for that Light; though the maniac ruler-titans, who hold it in hypnotic chains, continue to drive it to the shambles. But they will exhaust and destroy each other before long. Then the cry of Mankind for Light will

arise strongly to the Deep and High Heaven, hidden in the Human Heart; and then will be the time to raise diligently aloft the Light, still burning in the East, though dimly, much obscured by the thick smoke of selfishness and superstitions.

Radhakrishnan has been endowed with the power of vision, the virtuous quality of insight, which should see the heart of the Védānṭa; and also the fundamental principles of Psychology, which arise out of and are part of that Védānṭa; and the practical application of which to the administration of human affairs, yields the Socio-Individual Organisation, the Code of Individuo-Social Life, the Organisation of the Human Race, the Scientific Socialism, *Varṇa-Āshrama*-Dharma (based on vocational temperament; *not* on birth), which adjusts and reconciles egoism and altruism, individual life and collective life, Material 'Real' and Spiritual 'Ideal', and gives full and beneficent content and substance to what are, at present, the hollow, meaningless, misleading and deceiving slogans—'Freedom', 'Freedom of Europe', 'Freedom of Asia', 'Freedom of the world', 'a New and Better World', 'Co-prosperity', 'Collective Security', etc.

He has been gifted with a rare genius for splendid diction, for powerful yet succinct exposition, for interpretation of the ancients as well as the moderns at their best, and the relating of them to the living issues of philosophy and religion, the issues of human life in all its aspects. He has also been provided with the indispensable instruments for the effective exercise of these rare powers, viz., an equally rare eloquence of tongue and pen both, and capacity and stamina for much travel. Finally, to crown all, he has a sense of *spiritual guidance.*

All these great gifts in combination, mark him out as a man with a mission, the *mission* to serve as a channel for that Spiritual Light of the Ancient Wisdom.

It is clearly his Spirit-ordained mission to give to the world, (to use his own words), "a philosophy which will combine the best of European Humanism and Asiatic Religion, a philosophy profounder and more living than either, endowed with greater spiritual and ethical force, which will conquer the hearts of men, and compel peoples to acknowledge its sway," (p. 259); in other words, a Philosophy, which will reconcile the opposites, mentioned by himself, most of them, from time to time; *Līlā*, Play, and historical Fulfilment; Eternal life, and Temporal development; time suspended, and time extended; Perfection, and Progress; re-orientation, and improvement; Eternity, and Time; Immobile Absolute, and Relative and creative World; non-his-

torical God, and historical Incarnation; Transcendental *Paramārtha,* and Empirical *Vyavahāra*; Impersonal Supreme, and Personal Gods; and finally, universalistic Altruistic Socialism, and Egoist Individualism.

The prayers of an old man, now coming to the close of his life and work on this sphere of sorrows, go out for Radhakrishnan, that he may be preserved safe through these awful times of world-wide madness and calamity; that he may complete the Vedic span of life, ten decades, *sharadah shatam;* that he may have ever greater power of truth-seeing insight, *ṛtam-bharā prajñā*, of travel with the sun, *sūrya-anuvṛttih*, from east to west, and west to east, again and again; that the public may enable him to conserve these precious powers for their proper use, and not fritter them away by multifarious demands for the promotion of small ephemeral functions; that he may make of that great educational institution, the Benares University, which has now been put into his hands by that same Providence which has been guiding him throughout life, a powerful instrument for the uplift of India; and that he may proclaim to all the peoples of the earth, the Great Message of *how* to frame the *New World Order*, en-soul-ed, en-liven-ed, inspired by, *World Religion;* by the means of a thorough exposition of the virtues, and exposure of the vices, of the three warring idealogies of the present time, viz., Imperialist-Democratism, Fascist-Nazism, Bolshevist-Communism; by the means of a full explanation of the Principles of the old Vedic Social Organisation and of their application in detail to modern conditions and problems, whereby an all-satisfying Individuo-Socialism or Socio-Individualism can be established; by the means of the achievement, thereby, of a detailed and complete Synthesis, in the actual Life of Mankind, of *Eastern Religions and Western Thought.*

अहो, महाभाग !, भवान् अमोघदृक् शुचिश्रवाः सत्यरतो धृतव्रतः,
मनुष्यलोकस्य रुजानिवृत्तये, समाधिनाऽनुस्मर मानवीं स्मृतिं;

ततश्च, भूरिश्रुत !, भाषितं मनोः, समाप्यते येन विदां बुभुत्सितं,
आख्याहि, दुःखैर् मुहुर् अर्दितात्मनां; संतापनिर्वाणम् उशंति नाऽन्यथा ।

ॐ, सर्वस्तरतु दुर्गाणि, सर्वो भद्राणि पश्यतु, सर्वः सद्बुद्धिं आप्नोतु, सर्वः सर्वत्र नंदतु, ॐ

Benares,
17-3-1942.

THE JURASSIC ROCKS OF CUTCH—THEIR BEARING ON SOME PROBLEMS OF INDIAN GEOLOGY[1]

I. Introduction

I THANK you very sincerely for the honour you have done me in electing me the President of your section this year. I propose to deal with the Jurassic Rocks of Cutch, a subject which relates to another Indian State not very far from here, and on which very valuable and interesting work has been done within recent years.

The importance of the Jurassic Rocks of Cutch centres in

(1) the fossils, which occur there in considerable abundance, and

(2) the plant beds, which enable us to fix the upper limit of the Gondwana System.

These points of interest were realized as early as 1868 as recorded by Thomas Oldham (1869, p. 31), the then Superintendent of Geological Survey of India and Director of Geological Museum, Calcutta. Even after nearly seventy-five years of geological investigations in India, they have not yielded this place of pride, especially with respect to the plant beds, to any other area discovered since then. Subsequent researches have only enhanced their value and have created one more point of interest, viz.

(3) the excellence of the area, which makes detailed stratigraphical work and mapping of the groups and zones possible.

II. The Jurassic Rocks of Cutch.

(i) *General Account*

The Jurassic Rocks of Cutch occupy practically half of the State territories. They extend from the Patcham Islands to the middle of the main territory of Cutch and traverse the country in an east-west direction from one end to the other. They form three parallel anticlinal ranges of hills with an isolated mass to the east in Wagur. They have gentle dips (10° to 25°) to the south and high dips (20° to 50°) to the north. The tops have been denuded and the lower beds, largely belonging to the Chari Group, outcrop as domes along the anticlinal axes. It is possible that in the north under the Rann, i.e. between

[1] Presidential Address delivered at the Geology Section of the 29th Indian Science Congress at Baroda on January 5, 1942.

the first and the second anticline, the continuation of Wagur rocks are concealed. A big strike fault runs east and west along the northern foot of the hill range formed by the third anticline. There are a few minor faults mainly in the region towards Lakhpat. To the south the rocks are covered by the Deccan Trap. Igneous intrusives occur as sills interstratified with the beds and as dykes and ramifying intrusions.

The intrusion of the magma is connected with the igneous activity of the Deccan Trap period and may be of the same age. The folding of the Jurassic beds may also be more or less contemporaneous owing to the close relationship of the folds with the igneous intrusions. The dislocation of these beds is necessarily somewhat younger, since the faults displace these as well as the interbedded sills.

(ii) *History of Investigations*

The history of the geological investigations of the province of Cutch may be said to date from Grant's paper (1837), read before the Geological Society of London, though papers, describing the great earthquake of Cutch of 1819 and its results, by MacMurdo and by Burnes, and notice by Sykes (1834), respecting some fossils collected in Cutch by Captain Smee and Colonel Pottinger, had appeared earlier. Though Grant's paper deals with the geology of the whole province and is accompanied by a map, plates and list of fossils (plants were worked out by Morris and invertebrates by Sowerby), it, owing to its early date of publication when many old views which have since been discarded prevailed, has failed to add much to our knowledge of that area. The first satisfactory views of the geological structure of the area were made available by W. T. Blanford (1867, p. 17) as a result of rapid traverses of the country from south to north and back in 1863. But it was not till Wynne and Fedden's work (1869; 1872; T. Oldham, 1869) that a detailed account of the general geology of this area was available. They divided the Jurassic Rocks of Cutch into an upper and a lower series. Their 'upper series' comprised the plant bearing rocks (*Palaeozamia* beds) and their 'lower series' the marine fossil bearing rocks of the earlier workers. Wynne expressed that the 'lower series' were equivalent to Dogger (Middle Jurassic) and both the series together to Oolitic of England. But the results of the study of the Cephalopods by Waagen (1871; 1873, p. i) and of the stratigraphical relations of the rocks in the field by Stoliczka, during his short visit for that purpose in 1872 resulted in the establishment of four groups known as the Patcham, Chari, Katrol and Umia groups in ascending order.

The Patcham, Chari, Katrol and lower part of the Umia of these workers corresponds to the 'lower series' and the upper part of the Umia to the 'upper series' of Wynne. Waagen came to the conclusion that Patcham was equivalent to Bath Group, Lower and Middle Chari to Kelloway Group, Upper Chari and Lower Katrol to Oxford Group, Upper Katrol to Kimmeridge Group and Umia to Tithon Group. The beds at the Ukra hill, in the extreme west of Cutch, yielded some Cretaceous forms and were, therefore, assigned to that age. Subsequently R. D. Oldham in 1893 (p. 217) and Vredenburg in 1910 (p. 87) expressed their views regarding the relative ages of these groups. The main modifications introduced by Oldham on the basis of Stoliczka's field notes, over Waagen's view were, firstly, the enlarging of the term Umia to include the Cretaceous beds at Ukra hill also, and secondly, assigning the Upper Umia beds of Waagen, i.e. his Middle Umia, to doubtful Wealden age and thirdly, assigning the Cretaceous beds at Ukra hill to Upper Neocomian. Vredenburg agreeing with R. D. Oldham in the extended use of the term Umia introduced the following changes. Firstly, the Upper Chari was assigned to Oxfordian; secondly, the Lower Katrol to Sequanian; thirdly, Tithonian was omitted and the Lower Umia was assigned to Portlandian and Neocomian; fourthly, Upper Umia of Waagen, i.e. Middle Umia of Oldham to Barremian; fifthly, the Cretaceous beds were assigned to Aptian.

(iii) *Recent Researches*

The recent researches on the Jurassics of Cutch began after a lapse of nearly half a century, as Waagen's work of 1873 was practically the last contribution on this subject.

Raj Nath with the object of establishing a detailed succession of the Jurassic Rocks of Cutch, to develop a local detailed faunal time-scale, and also to find out how far the field evidence in India would support the hemerae of Buckman, carried out detailed field investigations coupled with detailed mapping in the year 1927. More or less at the same time, Dr. Spath who had worked out Blake's collection of ammonites (Spath, 1924) was entrusted by the Geological Survey of India with the much-needed revision of the Jurassic Cephalopods of Cutch. In addition to this material the collections of Raj Nath, of Mr. J. H. Smith and that of others were also at his disposal. He also had free consultation of the geological map and of other field observations then freshly made by Raj Nath.

Patcham and Chari Groups—Raj Nath with the object of zoning divided the Patcham and the Chari beds at one locality,

Jumara, into 26 beds and mapped them as such on 4" = 1 mile scale map (1934a, p. 346). From the same locality Blake had made his collection of ammonites and had numbered his beds from 1 to 14, but unfortunately after his death his field notes were lost. Since the beds below No. 21 of Raj Nath are mainly calcareous rocks and limestones, while bed No. 21 and those above it are mainly shales, Raj Nath on the basis of lithology fixes the division between Patcham and Chari at the base of his bed No. 21. Dr. Spath, however, on the basis of palaeontological grounds, fixes the limit much lower down at the base of bed No. 24. Since the two groups, Patcham and Chari, have distinct lithological characters (as pointed above), lithological considerations should weigh more in drawing a boundary between them than the palaeontological considerations. Further, *Macrocephalites triangularis*, which has been chosen by Dr. Spath as a zone fossil for Lower *Macrocephalus* beds, is not restricted up to bed No. 24 only, but it extends below to beds No. 25 and 26 also. The case, therefore, for lithological considerations is all the more strong.

According to all the earlier workers only Patcham was regarded equivalent to Bathonian. Raj Nath on the basis of an unconformity observed by him between beds No. 23 and 22 and on the find of a Callovian form, a new species of *Nautilus*, extended Callovian down into the topmost Patcham. But Dr. Spath extends Bathonian right up to bed No. 10, i.e. roughly up to the top of Middle Chari. He regards his Patcham Group, i.e. beds below No. 24, as equivalent to Lower Bathonian and his *Macrocephalus* beds, which are from bed No. 24 to 10, i.e. roughly Lower and Middle Chari, as equivalent to Upper Bathonian. He subdivides his *Macrocephalus* beds into lower middle and upper divisions, comprising respectively of beds No. 24 to 22, 21 to 14 and No. 13 to 10 of Raj Nath and chooses three species, *triangularis*, *harveyi* and *tumidus* of Macrocephalitidae for the three respective divisions. Of these the first is a Cutch form and the other two are European species. The beds lying between his Upper *Macrocephalus* beds and Dhosa Oolite shales, i.e. from bed No. 9 to 1a of Raj Nath, have been grouped by Dr. Spath into *Rehmanni* beds, *Anceps* beds and *Athleta* beds, comprising respectively of beds No. 9 to 6, 5 and 4 and No. 3 and 2 of Raj Nath. The three respective divisions are characterized by Reinekeids of early *rehmanni*-group, intermediate *anceps* group and of bituberculate *fraasi*-group of the *athleta* beds. He by extending the Bathonian restricts the range of Callovian to his *Rehmanni* beds and *Anceps* beds. He assigns his *Athleta* beds and Dhosa Oolite shales, i.e. beds No. 3 to parts

of 1, to Divesian, and the Brown (Lower) and Green (Upper) Dhosa Oolites to Argovian. As a result of the study of the Brachiopod fauna (1943b, p. 351) Raj Nath has named bed No. 7 as *Zeilleria Zone* because *Zeilleria rostellata,* Kitchin is very abundant in, and exclusively characterizes, this bed.

As the Golden Oolite bed occurs only at two localities, viz. Jhura and Keera domes in the Lower Chari beds, Raj Nath thinks it cannot be said to mark any definite horizon in the stratigraphy of Cutch in general. According to Raj Nath there is a slight unconformity between the Dhosa Oolite 'proper', i.e. the Brown (Lower) Dhosa Oolite, and the Katrol beds, as the Green Oolite bed, the Upper Dhosa Oolite, is not present everywhere. This is now supported by Dr. Spath on palaeontological grounds.

Katrol—Waagen had divided the Katrol into two divisions, the Lower and the Upper, and he placed the Kantcote Sandstones in his lower division. Neither Raj Nath nor Mr. J. H. Smith (1912-1915) of Bhuj, who is an enthusiastic collector of fossils and has described some fine sections, visited Wagur, the eastern part of Cutch where Kantcote Sandstones are exposed, and therefore, no fresh field observations about them are available. However, Dr. Spath in 1924 included this formation in the Dhosa Oolite, but in 1928 he placed it with the Lower Kimmeridgian Belemnite Marls as a transitional group (of about *bimammatus* age) between the Dhosa Oolite and the Lower Katrol Ammonite bed. Now, on the basis of four species of *Ataxioceras,* which are known from Dhosa Oolite, but which are somewhat similar to the forms recorded from the *bimammatus* beds or their equivalents, such as the *Trigonia* beds of Weymouth, or the Harsova fauna of Rumania, he (Spath, 1933, p. 785) thinks that the whole of the Kantcote Sandstone is of Argovian (*transversarium* and *bimammatum*) age. He places it between Chari and Katrol proper as an independent group.

Raj Nath subdivided the Katrol proper in 1927, mostly on lithological grounds, into KI, KII, KIII, KIV and renamed them in 1932 as Lower Katrol, Middle Katrol, Upper Katrol (e.g. at Gajansar) and Hard Sandstones. He had assigned the first two divisions to Kimmeridgian, the third to Portlandian and the fourth, being barren, could not be assigned to any age. Dr. Spath on the other hand has put Belemnite Marls of Jurun as the lowest bed of Katrol on palaeontological grounds like the presence in these beds of three species of *Aspidoceras,* forms such as occur in the Lower Kimmeridgian, but not in the Argovian. He thinks that a portion of lower part of Middle Kim-

meridgian is not represented in Cutch and thus according to him there is a gap. He puts the Basal Katrol 'Ammonite Bed' second, the Middle Katrol Group (K_2) as third, Upper Katrol Group (pars = K_3) as fourth, Barren Upper Katrol Sandstones as fifth, Gudjinsar ('Katrol') beds as sixth, *Zamia*-shales of Nurrha and 'Katrol Beds' of Jara as seventh. Thus he has extended the limit of the Katrol to include beds up to the base of Umia Ammonite beds. Raj Nath, however, does not agree with him as regards the position of the *Zamia*-shales, which along with the 'upper series' of Wynne, as discussed in subsequent pages, are found to be Post-Aptian, not older than Middle Cretaceous, on structural evidence.

The fauna of the Basal Katrol beds is characterized by 'the increase in the number of species of Oppelids and Aspidoceratids' and by 'the comparative rarity of Perisphintids other than *Torquatisphinctes*, and the complete absence of *Idoceras* or *Ataxioceras*. This last especially might easily be taken to prove the absence, in Kachh, of at least part of the Lower Kimmeridgian' (Spath, 1933, p. 789). According to Dr. Spath the two genera, *Glochiceras* which is well represented and confined to these lowest Katrol beds and *Taramelliceras*, point to a Middle Kimmeridgian age. Further, the ammonites of the next higher Katrol beds too support Middle rather than Lower Kimmeridgian age for the Basal Katrol beds.

The most notable feature of the Middle Katrol Group is the abundance of *Pachysphinctes*. *Streblites* and *Waagenia* persist and *Aspidoceras* is still common, all these point to a Middle Kimmeridgian age, approximately corresponding to the European *steraspis* zone.

The Upper Katrol beds have yielded the following intermediate forms in addition to those which persist from Middle Katrol :—

Aulacosphinctoides maridionalis, Spath.
Virgatosphinctes (?) *indosphinctoides*, Spath.

The fossils collected at Gajansar from beds resting directly on the Dhosa Oolite are of special interest. From their lithological position they were correlated by the earlier observers with the Lower Katrol Ammonite bed of the south, where the Upper Dhosa Oolite or equivalents of the Kantcote Sandstone and the Belemnite Marls are missing. *Haploceras elimatum*, which is common in the Antsalova fauna of Madagascar, is also the commonest ammonite at Gajansar. On the negative evidence of the absence of early species according to the European standards, the Gudjinsar beds and those at Nurrha and at

Jara are intermediate in age between the Upper Katrol beds of the South Cutch and the Tithonian Umia group of the north-west (Spath, 1933, p. 797).

'Umia' of Raj Nath, i.e. Lower Umia of Waagen—In the division of Umia Group Dr. Spath has followed Waagen, and has adopted two subdivisions, i.e. Umia Ammonite bed and Upper Umia Plant (and *Trigonia Crassa*) beds. But Raj Nath on the basis of field evidence has restricted the term 'Umia' to only the Lower Umia of Waagen and has divided it into five divisions : (1) Barren sandstones and shales, (2) the three Green Oolitic beds which have yielded the Tithonian ammonites, (3) Barren sandstones, (4) *Trigonia* beds, and (5) Barren rocks.

The three Green Oolitic beds of Raj Nath (i.e. the Basal Umia Ammonite bed of Dr. Spath) which are separated from the underlying Katrol beds by a great thickness of Barren sandstones and from where he collected all his Umia ammonites, have yielded *Micranthoceras* and all the numerous *Virgatosphinctes,* a form so dominant in the Umia beds. According to Dr. Spath (1933, p. 798) the Umia beds are of Lower Tithonian age, as in Madagascar *Micranthoceras* occurs with *Hildoglochiceras kobelli,* a Portlandian form, while in Mexico *M. microcanthum* is associated with *Proniceras* and *Durangites* which are almost certainly younger than *H. kobelli.* Moreover, he thinks that there is nothing in the Umia fauna that indicates the Upper Tithonian age.

The *Trigonia*-bearing beds overlie the three Green Oolitic beds and are separated by a thickness of 200-300 ft. of intervening sandstones. Kitchen has recorded the occurrence of the following forms of *Trigonia* from the Umia Group. These forms are grouped here into two sets : (1) those forms which are from such localities where, according to Raj Nath, the *Trigonia*-bearing beds overlie the Tithonian beds, and (2) those forms which are from such localities where the stratigraphical positions of the beds yielding Trigonias are not very definite as yet.

I. From localities where the Trigonia-bearing beds overlie the Tithonian beds

Trigonia parva, Kitchin—S.E. of Ghuneri.
,, *crassa,* Kitchin (abundant)—N.E. of Ghuneri, Haroda, N.E. of Umia.
,, *cardiniiformis,* Kitchin—Ghuneri.
,, *retrorsa,* Kitchin—N.E. of Ghuneri, N.E. of Umia, Haroda.
,, *spissicostata,* Kitchin—N.E. of Umia.

,, *dubia*, Kitchin—N.E. of Ghuneri, Haroda.
,, *V-scripta*, Kitchin—N.E. of Ghuneri.
,, *recurva*, Kitchin—N.E. of Ghuneri, N.E. of Umia.
,, *mamillata*, Kitchin—N.E. of Ghuneri.
,, *ventricosa*, (F. Krauss)—N.E. and S.E. of Ghuneri, Haroda, N.E. of Umia.
,, *pulchra*, Kitchin—S.E. of Ghuneri.

II. From localities where stratigraphical positions of the beds yielding Trigonias are not very definite as yet.

Trigonia tenuis, Kitchin—Kukrooa, Adooi, E. of Chobaree Wamka, N.E. of Jara.
,, *smeei*, J. de C. Sowerby—Kukrooa, E. of Chobaree Shahpur, W. of Trummo.
,, *trapeziformis*, Kitchin—S.E. of Trummo.
,, *remota*, Kitchin—S.E. of Habbye, Kass Scarp.

The age of the Trigonias of the first set would, therefore, be at least Upper Tithonian, if we accept according to Dr. Spath the Lower Tithonian age for the underlying Umia Ammonite beds, i.e. the three Green Oolitic beds. But if we take into account the time interval represented by the Barren Sandstones, occurring in between the two fossiliferous horizons, the age of the *Trigonia* beds would be at least Lower Cretaceous. This conclusion finds support from the observations of Kitchin (1903, p. 3) who on the basis of the study of the Trigonias from Cutch stated : 'Though none are identical with European forms, one, *Trigonia ventricosa*, Krauss, which is common also in the Uitenhage beds, is a representative of an essentially Cretaceous section of the *Trigoniae ;* moreover, it bears a very strong resemblance to the Cretaceous *T. tuberculifera*, described by Stoliczka from Southern India. There are other *Trigoniae* occurring with *T. ventricosa* which likewise bear a Cretaceous aspect ; one of these is referable to the same section of the genus as *T. ventricosa*, while the other may be classed with the Pseudoquadratae, a small group exhibiting characters which are usually associated with a Cretaceous facies......'.

'It seems most probable that in the Oomia Mollusca we are dealing with a passage fauna which, while retaining a partially jurassic aspect, was characterized also by the presence of types which marked the incoming of a true cretaceous facies. It is not improbable that such an intermingled fauna may have lived in this region at a time when wealden strata were being deposited in Europe. Such an opinion as this was expressed by Stoliczka on his return from work among the rocks of the Cutch Seires.'

The *Trigonia*-bearing beds are overlain by a considerable thickness, at least 1,000 ft., of Barren Rocks.

Ukra Beds and Bhuj Series—Raj Nath (1932), on the basis of structural evidence, places the upper division of Umia of Waagen including *Zamia*-beds, i.e. the 'Upper Jurassic Series' of Wynne, over Aptian beds of Ukra hill and has named them as Bhuj Series. Thus according to him there is an unconformity between the Katrol and Bhuj Series, the latter apparently lying directly over the former in the field. He believes that an interval of non-deposition or even of erosion occurred before the rocks of the Bhuj Stage were deposited on the Katrol beds. The presence of this unconformity revealed by Raj Nath finds further support from the following observations of Dr. Spath (1933, p. 737) : '......Mr Smith has now found a Katrol ammonite (*Aulacosphinctoides* sp., p. 529) in the bank of a lake two miles north of Bhuj ; and since the embankment was made up of material dug from the bed of the tank (Chhota Rudra Mata tank) only a few feet deep, it shows that the Middle Katrol beds here come almost to the surface. Again two miles north of Ler, on the surface of cultivated fields, weathered Lower Katrol Perisphinctids have been picked up......'. To my mind the occurrence at Nurrha, in the Katrol stage, of plant fossils having a very strong floral relationship with the Bhuj plant fossils, is due to this unconformity.

As according to Raj Nath the Bhuj Series are Post-Aptian, he is of opinion that they are not older than Middle Cretaceous, they may be slightly younger.

III. Upper Limit of the Gondwana System

The significance of the plant-bearing beds, i.e. the Bhuj Series of Raj Nath (= the 'Upper Jurassic' Series of Wynne), for fixing the upper limit of the Gondwana System because of their association with the marine fossiliferous beds, was realized as early as 1868 (T. Oldham, 1869, p. 31). Their importance from this point of view has remained unchanged during all these years, but their stratigraphical position has remained unsettled up till now.

In the earlier stages of investigations, even the mode of association of the plant-bearing beds (regarded as *terrestrial*) with the marine (Jurassic) fossiliferous beds was uncertain. Captain Grant left it doubtful; while W. T. Blanford (1867, p. 17) believed that the plant-bearing rocks were actually intercalated with the marine Jurassic rocks. Wynne arrived at the conclusion 'that a very few and very imperfect remains of

plants do occur in layers distinctly intercalated with the truly marine beds, and have probably been drifted into these localities from shores adjoining the seas in which the mollusca, now found fossilized in these beds, then existed. But as a whole the beds in which the well-marked *Palæozamiae*' (now called *Ptilophyllum*) 'occur are decidedly younger than those containing the truly Jurassic *Ammonites* and other characteristic fossils; and that they constitute an upper zone, but belonging to the Jurassic period' (T. Oldham, 1869, p. 31).

The question of the age of the plant-beds has been still more controversial than their mode of association. The conclusions arrived at, range from Bathonian to Middle Cretaceous. The evidences on which the age of the plant-bearing beds has been based, fall into two categories:—

(i) direct evidence based on the plant fossils contained in them, and

(ii) indirect evidence based on the invertebrate fossils contained in the beds stratigraphically older or younger than the plant-beds.

In the earlier years the plant-beds of Cutch were regarded as equivalent to Rajmahal (Wynne, 1869, p. 51) on the basis of few forms of *Ptilophyllum* (like *Ptilophyllum cutchense, P. acutifolium*) found common at the two places. But Feistmantel (1876a, p. 34) as a result of the study of the several fossil floras of India, including those from Cutch, did not agree in identifying the horizon of the Cutch with that of the Rajmahal. He assigned the Cutch horizon to Middle Jurassic (Bathonian) and Rajmahal to Lower Jurassic.

The evidence of the second category, though indirect, are regarded to be more reliable because of the marine invertebrate fossils contained in the beds associated with the plant-beds. On the basis of the Ammonites contained in the Umia Ammonite beds, taking them as immediately older than the plant-beds, they are referred to uncertain Post-Tithonian age by Waagen (1873, p. i), and to Upper Tithonian age by Dr. Spath (1933, p. 865). On the strength of results obtained by Kitchin (1903, p. 3, 1913) from the study of *Trigonia* and on the similarity of the marine Umia beds to the Uitenhage Series of South Africa, they are referred to Lower Cretaceous by Cotter (1917, p. 23). This view is still accepted in recent publications (Fox, 1931; Fox and others, 1940, pp. 71-77).

After the discovery of beds of Aptian age in Cutch by Stoliczka, the plant-beds were then regarded to be occurring

between the limits of two marine beds, one of Tithonian age and the other of Aptian age. They were consequently referred to Wealden by Stoliczka, Wealden or even Neocomian by W. T. Blanford (1878, p. 119), doubtful Wealden by R. D. Oldham (1893, p. 217), and as Barremian by Vredenburg (1910, p. 87).

The Bathonian or even lower age as favoured by the plant fossils was at great variance with the age, anything between Upper Tithonian to Lower Cretaceous, indicated by the invertebrate fossils. This discrepancy between the two evidences—from the plant and from the animal remains—which Feistmantel aptly calls 'palaeontological contradiction', led to a long controversy between him (1876a ; 1876b) and W. T. Blanford (1876 ; 1878).

Coming to recent researches, Raj Nath (1932, p. 173), as mentioned in the foregoing pages, has assigned the plant-beds to Post-Aptian age. In other words, the Umia Stage of the Gondwana System is Post-Aptian, probably of Middle Cretaceous age.

The discovery of a silicified palm wood which was collected from the plant-beds by the party from Benares and which has been described and named as *Palmoxylon mathuri* by Prof. Sahni (1932, p. 322), now solves this 'palaeontological contradiction' by providing an evidence of their higher age on the basis of plant fossils themselves, as the range of *Palmae* is from Upper Jurassic to Recent.

The flora of the plant-beds already contained elements differing widely in age, and the new find is an addition to the list. This feature may be to some extent characteristic of the flora itself, but in my opinion, it is to a large extent due to want of recognition of horizons in the plant-beds.

The Bhuj Series is of great thickness, but a considerable portion of this series over a large area has been eroded away, so much so, that at some places inliers of the underlying Katrol beds occur in the areas occupied by Bhuj Series (viz. at Chhota Rudra Mata tank only two miles north of Bhuj). The series is more or less horizontal and therefore the elevations of the localities ought to have been taken into consideration in the study of the plant fossils from this series. In the light of these observations, I believe that the Bhuj Series consists of at least three horizons, viz. *Zamia*-beds at the bottom, *Ptilophyllum*-beds at the middle and *Palmoxylon*-beds at the top. As expected, the uppermost beds of the Bhuj Series—the *Palmoxylon*-

beds—occur as remnant patches, only on the top of the isolated hills of igneous intrusives, standing in the midst of the plain occupied by the lower horizons of the Bhuj Series.

IV. Concluding Remarks

I have attempted to place before you an account of recent researches on the Jurassics of Cutch, wth their bearing on the Upper age limit of the Gondwana System. Detailed zoning has revealed that in the Jurassic strata of Cutch there are at least six unconformities : (1) between beds No. 23 and 22 at Jumara ; (2) between the Brown, i.e. the Lower Dhosa Oolite and the Katrol beds ; (3) of the age of Belemnite Marls of Jurun ; (4) of the age of lower part of Middle Kimmeridgian ; (5) between the Dhosa Oolite and the Gudjinsir 'Katrol' beds at Gajansar ; (6) between the Katrol and Bhuj Series. This shows that the sea, which had invaded Cutch, North-East Kathiawar, and Rajputana during the Upper Jurassic times,—and also during a part of Middle Jurassic times, if we accept the standard of the Jurassic System recommended by Siemon Wm. Muller (1941, pp. 1421-1443)—oscillated very much. The presence of such forms in Cutch as are comparable to forms of Himalayitidae of the Spiti Shales, indicates that to the north this sea was connected to the Tethys Sea, occupying the present position of the Himalayas. There also existed some form of connection between the Cutch sea and the sea in the south as revealed by the close faunal relationship between the Jurassics of Cutch and Madagascar. I do not wish to detain you longer with other problems of palaeontological and stratigraphical interest connected with these formations and their equivalents in other parts of India and adjacent countries.

The Jurassic Rocks of Cutch as already pointed out are very rich in fossils. In fact the earth is a great cemetery of these lowly creatures who serve so wonderfully even after their death by helping the geologist in the construction of the paleogeography of the past and in building up stratigraphy, which is helpful in the exploration of the minerals of economic importance. What service is the man capable of ? The present civilized man, at any rate, has exhibited it in this war which is a ruthless butchery and destruction of life and colossal waste of resources of the world. The blame for this destruction is often placed at the door of science. The scientists discover things in the spirit of devotion for truth and selfless service. There are enough resources in this world to make the entire mankind happy if only things are done in a scientific manner.

The subject of geology is of great cultural interest and of great economic importance (Watts; Parks; Holland), but it is really unfortunate that it has not received as much stimulus in India as in other countries. In one of the recent sessions, the British Association for the Advancement of Science constituted a committee which has recommended geology as a suitable subject for study at school stage (*Annual Report* for 1935, 1937 and *Nature*). It is high time that such universities in India as are teaching geology from the B.Sc. stage should include geology as a subject for studies at least at the Intermediate stage and other universities should also include geology in their undergraduate and graduate courses in science. To make the full use of the knowledge of geology for the industrial development of India, I strongly suggest that the following steps, in addition to others, should be taken at an early date :—

No. 1. The staff of the Geological Survey, which is too meagre for a vast country like India, should at least be doubled.

No. 2. A Mineral Research Institute should be established to investigate the problem of utilization of minerals already known in India and other allied problems.

No. 3. A well-equipped department for the mineral investigations with the help of geo-physical methods should be placed at the disposal of the above Institute.

The prosperity of a country depends largely upon its mineral wealth, and I need not emphasize the importance and the need for systematic researches to be carried out for the proper utilization and conservation of India's mineral wealth. Let us hope for the early advent of the period when the importance of geology to Mankind will be properly realized in this country.

REFERENCES :

Blanford, W. T., 1867.—On the geology of a portion of Kutch. *Mem. Geol. Sur. India*, Vol. VI, Pt. 1.

Blanford, W. T., 1876.—Note on the Geological Age of Certain Groups comprised in the Gondwana Series of India, and on the Evidence they afford of distinct Zoological and Botanical Terrestrial Regions in Ancient Epochs. *Rec. Geol. Sur. India*, Vol. IX, Pt. 3.

Blanford, W. T., 1878.—The Palaeontological Relations of the Gondwana System: A Reply to Dr. Feistmantel. *Rec. Geol. Sur. India*, Vol. XI, Pt. 1.

British Association for the Advancement of Science.—*Annual Report* for 1935, 1937.
Cotter, G. de P., 1917.—A Revised Classification of the Gondwana System. *Rec. Geol. Sur. India*, Vol. XLVIII, Pt. 1.
Feistmantel, O., 1876a.—Notes on the Age of some Fossil Floras of India. *Rec. Geol. Sur. India*, Vol. IX, Pt. 2.
Feistmantel, O., 1876b.—Notes on the Age of some Fossil Floras in India. *Rec. Geol. Sur. India*, Vol. IX, Pt. 4.
Fox, C. S., 1931.—The Gondwana System and Related Formations. *Mem. Geol. Sur. India*, Vol. LVIII.
Fox, C. S. and Others, 1940.—Classification and Age Limits of the Gondwana System. *Proc. Ind. Sc. Cong.*, 1940, Pt. IV.
Grant, C. W., Captain (since Colonel), 1837.—*Trans. Geol. Soc.*, London, Ser. 2, Vol. V.
Holland, Sir T. H., 1926.—Presidential Address, Section L. Educational Science. *Rep. Brit. Assoc. Adv. Sci.*, pp. 246-254.
Kitchin, F. L., 1903.—Jurassic Fauna of Kutch. Genus Trigonia. *Pal. Indica*, Ser. IX, Vol. III, Pt. 2.
Kitchin, F. L., 1913.—The Invertebrate Fauna and Palaeontological Relations of the Uitenhage Series. *Ann. South Afr. Mus.*, Vol. VII, Pt. 1.
Muller, Siemon Wm., 1941.—Standard of the Jurassic System. *Bull. Geol. Soc. America*, Vol. 52, No. 9.
Nature, Vol. 136, p. 708 ; Vol. 139, p. 251 ; Vol. 140, p. 595.
Oldham, T., 1869.—Annual Report for 1868. *Rec. Geol. Sur. India*, Vol. II, Pt. 2.
Oldham, R. D., 1893.—A Manual of the Geology of India, 2nd Edition.
Parks, W. A., 1925.—'Cultural Aspects in Geology', Presidential Address, Section C. *Rep. Brit. Assoc. Adv. Sci.*, pp. 55-74.
Raj Nath, 1932.—A Contribution to the Stratigraphy of Cutch. *Quart. Jour. Geol. Min. & Meta. Soc. of India*, Vol. IV, No. 4.
Raj Nath, 1934a.—Detailed Stratigraphy of the Jumara Area, Cutch. *Proc. Ind. Sc. Cong.*
Raj Nath, 1934b.—Revision of the Jurassic Brachiopod Fauna of Cutch. *Proc. Ind. Sc. Cong.*
Sahni, B., 1932.—*Palmoxylon, mathuri* a new species of petrified palms from Cutch, Western India. *Proc. Ind. Sc. Cong.*
Smith, J. H., 1912, 1913, 1914, 1915.—*Journ. Bombay Nat. Hist. Soc.*
Spath, L. F., 1924.—On the Blake Collection of Ammonites from Kachh, India. *Pal. Indica*, New Ser., Vol. IX, Mem. No. 1.

Spath, L. F., 1933.—Revision of the Jurassic Cephalopod Fauna of Kachh (Cutch). *Pal. Indica*, New Ser., Vol. IX, Memoir No. 2, Pt. VI.

Sykes, Lieutenant-Colonel, 1834.—Notice respecting some fossils collected in Kutch by Captain Walter Smee. *Trans. Geol. Soc.*, London, Vol. V, Second Series.

Vredenburg, E. W., 1910.—A Summary of the Geology of India, 2nd Edition.

Waagen, W., 1871.—Abstract of results of examination of the Ammonite fauna of Cutch, with remarks on their distribution among the beds, and probable age. *Rec. Geol. Sur. India*, Vol. IV, Pt. 4.

Waagen, W., 1873.—Jurassic Fauna of Kutch. Cephalopoda. *Pal. Indica.*, Ser. IX, Vol. I, Pt. 1.

Watts, W. W., 1924.—'Geology in the Service of Man.' Presidential Address, Section C. *Rep. Brit. Assoc. Adv. Sci.*, pp. 89-108.

Wynne, A. B., 1869.—Preliminary notes on the geology of Kutch. *Rec. Geol. Sur. India*, Vol. II, Pt. 3.

Wynne, A. B., 1872.—Geology of Kutch. *Mem. Geol. Sur. India*, Vol. IX, Pt. 1.

A PLEA FOR PSYCHOLOGISTS' INTEREST IN PSYCHICAL RESEARCH[1]

By Dr. B. L. Atreya

One of the most astonishing features of the contemporary Psychology is that it has been scrupulously avoiding all contact with that branch of scientific investigation which is known as "Phychical Research", although, as the name itself suggests, the latter is very closely related with it. Hardly any reference is found in any text book of Psychology to this great movement which is now no less than sixty years old and which has to its credit a number of such great discoveries as not only throw a flood of light on many a dark region of Psychology but will also revolutionize it and compel it to give up and change many of its generally accepted and least doubted conclusions. In its zeal to acquire the status of an exact science, Psychology has really lost its soul and has been wasting much of its time in aping the lower sciences of Mathematics, Physics and Chemistry, which are built on a Method which fails in the field of Psychology, unless supplemented by another which is peculiarly its own. Instead of standing on its own legs and having an autonomous status, which it could very well do, it depends too much upon other sciences and feels diffident to assert its independence and to evolve its own method and terminology. On the other hand, it feels quite satisfied in being called a branch of Biology and takes delight in depending on Physiology at every step of its career. How surprising it is when we read statements like these: "Psychology must discard all reference to consciousness" (Watson: *Behaviour*, p. 7). "The observation and study of human behaviour is reduced to a description of (a) biophysical stimuli (b) biophysical reactions, (c) biosocial stimuli, (d) biosocial responses....A mental factor is excluded because there is no justification for assuming that during the change from infancy to maturity any other forces are operative than those described by the natural sciences" (Weiss: *Psychologies of* 1930 Chap. XV, pp. 301-2). There was a time when Psychology lost its soul, there was another time when it lost its mind, now it seems to have lost its consciousness even, and we find it at present more or less contented to be called a chapter of Biology or of its branch Physiology and controlled and governed by the concepts and theories of these. Some of its exponents will be satisfied only when psychological facts could be further reduced to chemical, mechanical

[1]A paper read at the 29th Indian Science Congress, Baroda.

and mathematical formulae and equations. Degradation of Psychology (once the science of the soul) can go no further. It is a pity that it still retains the noble name with which it was christened centuries ago.

It is time for Psychology to wake up and to acquire an independent status worthy of itself. In order to retain its membership in the great fraternity of sciences, which it so greatly aspires for, it has nothing more to do than to follow as far as possible the scientific method of investigation, namely, the strictly inductive way of procedure. It has to be empirical, to be positive, and to be experimental, but this does by no means mean that it should set an arbitrary limit to its field of investigation and should make experiments only on simple, commonplace and every-day occurrences of human life and shut its eyes to and religiously avoid all contact with rare, serious and not easily intelligible but actually happening phenomena in the realm of life and consciousness. In fact, it is such phenomena which really give us insight into the secrets of life and crack our false and limited views and theories; and they should be welcome to psychologists as rare astronomical, physical and geological happenings are welcomed by scientists in those fields. In fact, a psychologist has no right to be called one if he is negligent of such happenings in life which defy his theories and doctrines based on very limited and common sorts of observations and experiments. We all know how greatly psychology has recently been benefited by the study of sub-normal and abnormal psychological phenomena and how tacitly, although very reluctantly, it has changed its views about human nature under the influence of the theories of those investigators in the fields of the abnormal whom it refused to give the title of psychologists. In fact, in many quarters attempts are made to understand the normal phenomena of human life in terms of the concepts and principles of the abnormal psychology formulated by those who were not psychologists at all. This tendency has led to as much trouble in Psychology as the tendency of understanding human nature in terms of Mathematics, Physics, Chemistry and Biology. As a corrective of both these wrong tendencies I propose that psychologists now should come in contact with and draw inspiration from that study of the supernormal, rare and mysterious facts of human life, which has been going on on thoroughly rational and scientific lines for more than sixty years in spite of psychologists' indifference and derision of it. I am sure a contact with this investigation known as "Psychical Research" will benefit psychology no less, perhaps much more, than contact with

"Psychoanalysis", "Psychiatry" and "Psychotherapy" etc. has done. It is bound to bring about a very healthy change in the body of its concepts and principles. On the other hand, Psychical Research itself, which is at present going on without much co-operation on the part of well-trained psychologists, will also be very much benefited when the latter will offer their co-operation, suggestions and guidance to it. It is very unfortunate that in India even Psychical Research is not being carried on, not to say anything of psychologists coming in contact with it. There is hardly any well-trained scientist who has devoted his time and energy to the study of supernormal, rare and mysterious phenomena of life, which occur in greater abundance here than elsewhere. There is hardly any library in India which can boast of having most of the literature published on the subject and hardly any University which patronises or encourages the study of the subject. The subject is worth study, if even not for any other purpose, at least to dispute its claims and to refute its doctrines which are very startling and disquieting for science. As Tyrrell has pointed out in his excellent work, *Science and Psychic Phenomena*, "No one whose interest is in the large and important things of life—who wishes to know what manner of being he is, what kind of world he lives in, how far the discoveries of science are to be accepted as final truth, where religion stands in the scheme of things and what reaction those other facts have on it, can afford to neglect psychical research" (p. xiii). "It is the only science which penetrates deep enough into human personality to shed a light on those urgent problems, which so far have oppressed and eluded us" (p. xii). "Psychical Research is at the meeting point of three great departments of human thought, Science, Philosophy and Religion; and the matter it deals with has a vital interest for all the three" (p. xii). Psychical Research has acquired a statuts too well-established to be ignored by psychology and other sciences, not to say of philosophy. Konstantin Oesterreich was right when he wrote, "It is no longer an open question whether we have firm ground under our feet with regard to these problems, or whether all is illusion, deception and fraud. The assertions of eminent investigators—some among them scientists of world-wide renown—are too numerous and too decided....To ignore their combined testimony would be but unscientific, dogmatic prejudice" (*Occultism and Modern Science*, p. 156).

What, then, is Psychical Research and what are its important and valuable discoveries? The astounding researches of the great scientists, Sir William Crookes and Sir William

Barrett into some strange and "supernatural" phenomena carried on in the seventies of the last century led to the formation of a Society in 1882 in England with the following objects :— "An examination of the nature and extent of any influence which may be exerted by one mind upon another, apart from any generally recognised mode of perception; the study of hypnotism and the forms of so called mesmeric trance.... clairvoyance and other allied phenomena; a careful investigation of any reports, resting on strong testimony, regarding apparitions at the moment of death or otherwise, or regarding disturbances in the houses reported to be haunted; an enquiry into various psychic phenomena called spiritualistic, with an attempt to discover their causes and general laws." "The aim of the Society," it was stated, "will be to approach these various questions without prejudice, and in the same spirit of exact and unimpassioned enquiry which has enabled science to solve so many problems, once not less obscure nor less hotly debated." Ever since its inception and through its branches in America and on the Continent of Europe, the Society has been doing splendid research and investigation work in the strictest possible scientific manner. Eminent scientists, philosophers and literary men, most of whom have been well-known for their passion for truth and honesty of purpose, have been active members, secretaries or presidents of the Society. Prof. Henry Sidgwick, who was once said to be "the most incorrigibly and exasperatingly critical and skeptical mind in England," was the first of its illustrious Presidents the list of whom includes the names of great men like Prof. Steward, Earl of Balfour, Prof. William James, Sir William Crookes, Sir William Barrett, Sir Oliver Lodge, Prof. Charles Richet. Prof. Henry Bergson, Prof. F. C. S. Schiller, Prof. Guilbert Murray, Prof. William McDougall, Prof. Hans Driesch. A vast and valuable literature, both in the form of Journals and books, describing and discussing its discoveries has come into existence. Prof. William James was forced to admit and confess, "In fact, were I asked to point to a scientific journal where hard-headedness and never-sleeping suspicion of sources of error might be seen in their full bloom, I think, I should have to fall back on *the Proceedings of the Society for Psychical Research*" (*Will to Believe and Other Essays*, p. 303-4). The Society has been more critically disposed to its own investigations than any of its critics could ever be. Every objection that any critic can advance against any investigation has been apprehended, discussed and considered at length by the members of the Society themselves. All "ordinary, normal explanations have been pressed to the utmost before admitting the possibility of supernormal character" of the phenomena

investigated. To quote Carrington, "All the trick methods have been thoroughly taken into account by careful investigators, and the conditions imposed are such that fraud has been seemingly rendered impossible in all *test* seances. Nearly all the exposures of fraudulent mediums which have been made in the past have been made by the psychical researchers themselves....In all psychic experimentation, we have endeavoured to render the conditions such that no conceivable form of trickery could account for the result obtained."

The discoveries made by this Society of scientifically trained researchers and their hypotheses for the explanation of the strange and mysterious phenomena they have observed or experimentally tested must certainly be of incalculable value and importance to Psychology and Philosophy. We have no time to give a detailed and exhaustive description of all the achievements of Psychical Research here. We shall refer here only to some of them which have a great bearing on Psychology. In this connection it will be better to quote some well-known and well-recognized authorities. Prof. Charles Richet, a professor of Physiology at the University of Paris, having conducted psychical research for no less than thirty years of his life, wrote, "Cryptesthesia, telekinesis, ectoplasm and premonition seem to be founded on granite; that is to say, on hundreds of exact observations and hundreds of rigorous experiments.. There is a faculty of cognition that differs radically from the usual sensorial faculties (Cryptesthesia). There are even in full daylight movements of objects without contact (Telekinesis). Hands, bodies and objects seem to take shape in their entirety from a cloud and take all the semblance of life (Ectoplasm). There occur premonitions that can be explained neither by chance nor by perspicacity and are sometimes verified in minute detail. Such are my firm and scientific conclusions." (*Thirty Years of Psychical Research*, pp. 599). Prof. William McDougall, the well-known psychologist, has written, "In my view the evidence for Telepathy is very strong....In my opinion there has been gathered a very weighty mass of evidence indicating that human personality does not always at death wholly cease to be a souce of influence upon the living. I hold that a case has been made out for clairvoyance of such strength that further investigation is imperatively needed; and I would say the same of many of the alleged supernormal physical phenomena of mediumship." (*Religion and Science of Life*, p. 80). Prof. Hans Driesch, the famous German biologist writes, "The study of Psychical Research is on the right path and is being pursued in most critical manner." (*Man and the Universe*, p. 98).

"We have spontaneous telepathy as a quite certain fundamental phenomenon....Quite certainly established further is thought-reading....To unprejudiced observation clairvoyance certainly appears at first sight to be present....but perhaps it was nevertheless all due to telepathy. Psychometry is, *prima facie,* a fact. Prophecy,..I will describe as probable" (*Psychical Research*). Recent experiments at the Duke University conducted by an able biologist, Dr. Rhine, have established the power of "Extra-sensory Perception" beyond doubt. He writes, "Extra-Sensory Perception is an actual demonstrable occurrence" (J. B. Rhine: *Extra-Sensory Perception,* p. 222). "E. S. P. is not a sensory phenomenon" (*Ibid,* p. 223). It is "fundamentally different from sensation" (Rhine: *New Frontiers of Mind,* p. 144). "It seems to be a fairly dependable and persistent capacity, when it is given proper conditions for its functioning" (*Extra-Sensory Perception,* p. 220). In an article on "Questions about Telepathy and Clairvoyance" in *Philosophy,* October, 1940, Prof. H. H. Price writes, "The evidence for Telepathy and Clairvoyance is both abundant and good ; and the evidence for Precognition—the most paradoxical, perhaps, of all the supernormal phenomena—is very considerable." Hereward Carrington, a distinguished worker in the field of Psychical Research for more than 35 years, writes in his famous work, *The Story of Psychic Science,* "Practically every psychical researcher agrees in thinking that the evidence in favour of the spiritistic hypothesis is now so strong that it may be justifiably employed as a *working theory*", (p. 323). "There is a strong evidence to prove survival" (p. 324). Such quotations can be multiplied *ad infinitum,* but we shall stop here. From all these it appears that there are genuine and well-investigated cases known to the psychical researcher which establish beyond doubt the occurrence of Telekinesis, Ectoplasm, Extra-sensory Perception, Telepathy Psychometry, Premonition and Survival. Other equally strange but actually occurring phenomena, such as Levitation, Dowsing, Raps, Poltergeists, Independent Writing, Independent Voice, Materialisation, Automatic Writing, Automatic Speech, Clairvoyance, Clair-audience, Apparitions, Hauntings and Memories of "past lives", etc. may for the present be left out of consideration.

By telekinesis we mean "levitation or movement of objects in the presence of a medium, without contact." If it is a fact, as it has been established beyond doubt that it is, can the psychology or physiology of today explain it in terms of its accepted principles and laws of human nature? If not, should they not be doubted and revised in the light of these facts? Ecto-

plasm is "a semi-material 'substance' which issues from the body of a materialising medium, and can be seen and handled by those present." "It is capable of being moulded into various shapes or structures by the dynamic action of the subconscious will of the medium." Ectoplasm was first clearly seen, handled, studied and photographed by Baron von Schrenck-Notzing and Mm. J. Bisson, during their experiments with a medium known as Eva C. About materialised forms out of ectoplasm coming out of the body of Eva C. Dr. Gustave Geley writes, "These presentations have grown under my own eyes from the beginning to the end of the phenomenon." "These materialized organs are not inert but biologically alive." In the same way Carrington writes, "I myself have observed materializations under perfect conditions of control, and have had the temporary hand melt within my own, as I held it firmly clasped." Biology, Anatomy, Physiology and Psychology do not yet know any such living matter as ectoplasm discovered by the psychical research, and so far their conception of human organism and its powers and functions is incomplete and hence defective. The phenomenon of Extra-sensory Perception (which includes clairvoyance and clairaudience) is in direct contradiction to the assumption of all psychologists that there can be no sensory knowledge without the use of sense-organs and that all knowledge of the external world comes to us through the gateways of the senses. But, as Rhine says, Extra-sensory Perception is "fundamentally different from sensation" and it suggests "the freedom of mind from the common material relations of extension and distance". For we have well-attested cases of perception of distant earthly scenes of events that have already taken place, or of those that are going to transpire in future as actually being enacted in the present. So extra-sensory perception appears to be free from the shackles of time as well as of space. Thus it covers even what is called Premonition, that is, "a supernormal indication of any kind of event still in the future." Psychology does not yet know of any such power of Perception and if Extra-sensory Perception, unbound by time and space, is a fact of actual occurrence, as it appears to be from the overwhelming evidence of Psychical Research, Psychology will have to discard some of its assumptions and to seek for some suitable hypothesis with regard to the process of knowledge. Our senses will certainly cease to be regarded as the only possible channels of perceptual knowledge. As Prof. H. H. Price has put it, "If Telepathy and Clairvoyance do occur—and I see no way of denying it—then surely they *must* be extremely important. For it will follow that the human mind has powers extremely different from sense-perception, introspection, memory

and inference. If Precognition occurs, we shall probably have to revise our theories of Time and Causation in the most drastic manner." (*Philosophy*, October, 1940, "Questions about Telepathy and Clairvoyance)." The phenomenon of Psychometry presents still greater difficulties for the modern psychological view of knowledge. By Psychometry we mean the power possessed by certain individuals which enables them "to tell the past history of an object merely by handling it, and also to receive various impressions at the same time regarding the environment of the object in question." According to Prof. Driesch, as has already been pointed out, "Psychometry is, *prima facie*, a fact." It, however, baffles all attempts at explanation in terms of the known laws of knowledge and perception. In the words of Driesch, the great biologist, "Our attempts at an explanation must abandon material hypotheses and turn to 'spiritual' ones:....Psychometry is probably the strangest thing presented to us by our new science. Only the impossibility of a normal physical explanation can be regarded as established" (*Psychical Research*). Psychology has to learn modesty and humility from the fact that there are more things in the field of our actual and potential knowledge than it knows.

If there is any phenomenon whose occurrence is more certain than of any other in the field of Psychical Research and which is no longer doubted to occur by any body who is even in the least touch with the Research, it is Telepathy, which was long ago defined by Myers as "The communication of impressions of any kind from one mind to another, independently of the recognized channels of sense." Telepathy is now-a-days regarded as an established fact, and a *vera causa* by all the psychic investigators. Admission of Telepathy as a fact and as a power common to all men is based on a lot of convincing evidence collected by the psychical researchers and other people interested in this phenomenon. It is of two kinds, namely, *spontaneous* and *experimental*. The former consists of those cases of occasional, spontaneous and unexpected reception of unusual ideas, images, wishes, or messages on the part of some 'percipient', which were later on found to have been trnasmitted by some 'agent' consciously or semi-consciously under the stress of some crisis in life or under the influence of some deep emotion. A very interesting type of spontaneous telepathic communications consists of those cases in which a sensory hallucination experienced by a percipient corresponds with some great crisis, such as serious illness, accident or death of the agent. In such cases often an apparition of the agent appeared before

the percipient and conveyed the information or the message either directly or symbolically. Experimental investigations on Telepathy have been carried on in various countries by people trained in scientific method, who were actuated by a passion for truth alone. Thousands of experiments under fully controlled conditions have been made, with agents and percipients in normal waking condition, in hypnotized condition, in the same room, in different rooms of the same house, in different houses of the same city, in different countries, at the distance of a few feet, and at a distance of thousand miles. Transmitted and more or less correctly received contents have been too varied to be enumerated, Impressions of numbers, diagrams, playing cards, pictures, scenes, real or imaginary, incidents, emotions, feelings, sensations of various kinds including those of physical pain, impulses to act in a ceratin way, wishes and desires etc. have been successfully transmitted and received. Successes have been too numerous to be explained by chance-coincidences. These experiments have established it beyond doubt that mind can communicate with mind without the aid of physical means of communication. If that is so, how will the present-day materialistic and physiological psychology explain it ? It can in no way do it, and being unable to explain and feeling afraid of its own limitation and incapacity, it denies the very existence and occurrence of Telepathy without its exponents even having read any book on Psychical Research and without having made any experiment. There can be no greater example of scientific dogmatism than this. It is a pity that many psychologists do not know that telepathy is now indisputably accepted as a *fact* by all psychic researchers and used by them as an explanatory principle for still more complex problems ; that they do not know that without taking recourse to telepathy many of the mediumistic communications would remain quite inexplicable for one who is not prepared to accept spiritism, the only other alternative explanation. In the words of Carrington, "If we refuse to admit telepathy, the evidence for direct spiritistic intervention would become overwhelming." If a psychologist is not prepared even to admit telepathy, how can he accept the only other alternative which will upset all his theories and beliefs. For a true scientist, however, facts must be more valuable and respectable than theories and beliefs.

Taking telepathy to be a fact, how can we explain its occurrence through the known laws of Physics, Biology and Psychology. It *modus operendi* is still unknown and unsettled. The first suggestion that comes to the mind in this connection is that, on the analogy of wireless transmission, we may suppose

that the brain of the agent generates some sort of energy which is transmitted in the form of waves through some physical medium to the brain of the percipient. Such a hypothesis is open to several objections, some of which may be mentioned here. All kinds of radiant energy, hitherto known to science, are found obeying the law of "inverse square" which means that in spreading around from their sources in the form of expanding waves they would decay in force in proportion to the square of the distance from the source. Thus, to be effective at great distance the waves require a tremendous force exercised by the source. But there is no evidence to show that great effort is made by the agent in experiments on distant telepathy. Distance, in fact, seems to make little or no difference in successful thought-transference. Telepathy works as freely and effectively over great distances as over short ones. In quite a large number of cases, dying persons, having very little energy left in them, have successfully transmitted their ideas and feelings at very great distances. Again, when a radiant energy passes through space it produces some effect on the medium through which it passes. But no such effect of brain-energy has ever been detected by even the most delicate instruments. Further, no transmitting or receiving organ has yet been discovered in the human brain by physiology or anatomy. Moreover, if ideas, feelings and wishes were to be transmitted through some physical medium in space in the form of waves, they would require to be translated into the latter according to some fixed code. But no such code is made use of either by the agent or by the percipient in experimental or in spontaneous telepathy. Again, on the basis of the physical theory of telepathy, it is very difficult to understand why only a particular brain out of the countless millions existing in the world should receive the impression transmitted by some other brain. It is on account of such difficulties that the physical or physiological theory of telepathy, which was first suggested and expounded by Sir William Crookes in his Presidential Address before the British Association for Advancement of Science in 1898, has been abandoned by investigators in the field. Telepathy is now regarded as a *purely mental or spiritual* occurrence, governed by some super-physical and super-physiological laws hitherto unknown to man. Some postulate a kind of mental affinity, others some sort of spiritual gravitation, and others still some Cosmic Mind pervading all the individual Minds. But all these ideas are foreign and unpalatable to the current psychology which instead of remodelling its own theories in the light of the strange phenomena denies their very occurrence without making even a single experiment.

More baffling for Psychology than Telepathy is the phenomenon of 'Possession' or 'Trance-personality' as it is called in the literature of Psychical Research. Whatever their explanation, very realistic and extraordinary cases of possession and trance personalities do occur, and it is the duty of psychologists to examine them and to explain them, and in case they are not explicable in terms of the principles of general and abnormal psychology, to formulate some new and adequate principles of what may now be called *Super-normal Psychology*. Prof. William James was the discoverer of a wonderful medium, Mrs. Piper, who could pass into a trance and through whom in entranced condition some other and quite different personalities could communicate with the investigators. She was a very remarkable case of trance-mediumship and it is largely on account of her psychic powers that a large number of investigators became convinced of the validity of spiritualism. Prof. William James wrote about Mrs. Piper, "She knows things in her trance which she cannot possibly have heard in her waking state." Dr. Hodgson, a very critical and skeptical mind, having studied Mrs. Piper's case came to the conclusion, "I cannot profess to have any doubt but that the chief "communicators".. are verily the personalities that they claim to be; that they have survived the change that we call death, and that they have directly communicated with us whom we call living through Mrs. Piper's entranced organism." There have been other good trance mediums also, such as Mrs. Osborne Leonard, Mrs. Willett, Miss Verall and Mrs. Holland, who have advanced our knowledge of trance-personalities considerably. There are three main types of trances : (1) A trance in which the normal consciousness of the medium disappears and a secondary entity takes its place and controls the sensory and motor mechanism of the medium. Messages coming from the controlling consciousness through speech or writing usually purport to be coming from a deceased person. When the secondary personality is habitually the same on all occasions of trance, it is called the medium's "control" ("possessor" in India). The control often claims to act as an intermediary for other deceased persons who remain in the background and are called "communicators." (2) Sometimes a communicator displaces the control and operates the mechanism of the medium directly. (3) There is a rare class of trances in which the medium, while retaining her or his consciousness throughout the seance, gives written or spoken messages purporting to be coming from deceased personalities. All of these kinds of trance have been very carefully studied by psychical researchers, but opinion about their implications is divided. We shall not enter here

into detailed controversies and arguments and counter-arguments of the various theories, but shall only point out some outstanding ways of explaining the phenomenon of trance-personalities and their shortcomings.

Psychical researchers who are students of psychology are naturally inclined first to regard trance-personalities "as instances of the dual and multiple personalities met with in abnormal psychology." But they soon discover that this explanation does not go the whole length. It holds good in very superficial and very ordinary cases. It may explain the dramatic nature of the secondary personality, but it fails to explain the supernormal nature of the information revealed by the personality. Prof. C. D. Broad has advanced a theory known as "the Compound Theory." According to him the mind is a compound of two factors, the 'psychic factor' and the 'bodily factor.' The characteristics of the mind are jointly dependent on both the factors. The psychic factor is something which 'persists' even after the death of the body. It may sometimes become temporarily united with the body of the entranced medium and thus form a temporary "mind" or "mindkin." But this theory fails to explain how in case of Mrs. Willett who retained her own control over her organs of speech and writing, a life-like communicator delivered his message through her. It further fails to explain the fact that the communicators sometimes are possessed of knowledge of the happenings after their death. This knowledge could not have been acquired by the isolated psychic factor. It is not merely knowledge of the dead person but of his entire personality that is reflected in the communicator, which is not possible in a compound of some one's psychic factor and another's body. The theory cannot also explain inconsistency of communications and change of communicators, which often occur in a continued seance.

The Telepathic Theory, which is sometimes joined to the Compound theory, and sometimes to the "Secondary Personality" theory of abnormal psychology in order to explain the dramatic personalising nature of the communicators, is a great rival of the "Survival Theory" and has to be thoroughly tried before the latter could be accepted. But here we are already on superphysical grounds, trying to explain a mysterious phenomenon in terms of mysterious principles. Psychology does not help us here at all. In the words of Carrington, "As to the *facts themselves,* there can be no question ; they exist ; they are supernormal.". The telepathic theory consists in presupposing that the medium's mind, conscious or subconscious, telepathically gets the information displayed by all "communi-

cations" from the minds of the "sitters" or even from any other person anywhere in the world who possessed it, and then dramatizes it in the same way as we do in dreams or in hypnotic trance, into a consistent personality, which was known to the medium when it was alive. This is the only alternative and a great rival of the survival theory.

The crux of the Problem "Telepathy *versus* Survival" is: how does the medium get knowledge of facts which were known exclusively to the person who is now dead, as it sometimes actually happens, on the one hand; and how to be sure of the identity of the alleged possessor or communicator with the personality of the deceased who the former claims to be, on the other. Apart from these chief difficulties much can be and has been said in favour of both the hypotheses or for and against the hypothesis of Survival, which flatly goes against the modern psycho-physiological conception of personality. The arguments against survival may be briefly stated thus: According to modern physiology and psychology mind depends upon the brain or is a function of the latter. Science knows no other world of existence than the physical, and so it goes against the accepted notions of science to postulate a spiritual world. The information alleged to be coming from the departed or deceased men is sometimes obtained by fraudulent means and it is likely that fraudulent means are always used by mediums. It is *a priori* an improbable theory that the dead should survive. The messages received are often quite uncharacteristic of the personalities from which they are alleged to come; they often betray ignorance of the facts which were known to the personalities when they were alive, and are sometimes pedantic and expressed in wrong and ungrammatical language. They are often full of lies and errors. Much of them is contributed by the subconscious or unconscious of the medium. The information purporting to be coming from the deceased can often be explained as obtained by the medium through his or her supernormal power of extra-sensory perception, clairvoyance, clairaudience or telepathy. The personal character of the communicators bears a close resemblance with the artificial and easily understood dream, hypnotic and abnormal personalities. To eliminate the hypothesis of telepathy the following reasons are advanced by a section of psychical researchers: There is sufficient evidence of personal identity in many of the cases examined by them. To ascertain identity of the communicating personality with the alleged deceased personality several special tests, such as "Post-mortem letters", "Classical knowledge", "Cross-correspondence" or "Concordant automatisms", "Book-

tests", "News-paper tests", "Proxy-sittings", "Exclusive knowledge", "Reaction tests", and "Psychoanalysis" etc. have been devised by the earnest investigators and these tests have helped them greatly to differentiate the "communicator" from the whole or part of the personality of the medium and to identify it with at least a part of that of the deceased. Telepathy cannot explain how a particular piece of information connected with the deceased alone is selected out of a lot of it present in the minds of the sitters and other persons existing in the world or how various pieces of information are collected from various minds and how they are combined into a unitary and life-like personality. In that case telepathy verges on omniscience. But then why should there be mistakes and false personification. What actually appears to happen in some of the cases of communication and possession is that communicators (in case they are more than one, as often is the case) or possessors show signs of differences in their own personalities, different degrees of familiarity with the different sitters, differences in their own ability to communicate or control the sensory and motor mechanism of the medium, and they change and appear and disappear individually during the seance or possession-trance. Some of them communicate directly while others, unable to do so, indirectly through some "control." The difficulties, mistakes and failures of communication are likely due to forgetfulness brought about by the shock of death or by change of physical vehicle and environment, to differences in conditions in which one is placed after death, to the difficulties in acquiring control over the sensory-motor mechanism of the medium and to the difficulties the control or the communicators on the other side must be experiencing in connecting themselves with the physical world and the medium, which may be quite as unnatural to them as it is to us to hear from them. Taking into consideration all these points, the Survival theory stands in good stead, in spite of its being "scientifically" improbable. "Practically every psychical researcher", therefore, as Hereward Carrington puts it, "agrees in thinking that the evidence in favour of the spiritistic hypothesis is now so strong that it may be justifiably employed as a *working theory.*" (*The Story of Psychic Science,* p. 323).

Nothing can be stranger than the fact that our so called scientific psychology is quite unaware and unmindful of all these facts and theories which incalculably add to our knowledge of human nature which our science professes to deal with. The motive of this indifference verging on disrespect and disregard for another science—about which the great biologist and philosopher Hans Driesch said sometime ago, "There is the youngest

of all the sciences, *Psychical Research*, which I appreciate and esteem very highly," and about which a great scientific writer Bernhard Bavink writes, "The subject, a knowledge of which is absolutely essential if one is to get as clear a view as possible concerning the final questions of the philosophy of nature" (Bavink: *The Anatomy of Modern Science*, p. 520)—is not far to seek. New converts are tenacious to the creed to the extent of folly. Psychology has won the status of a science with great difficulty and very recently. It doggedly pursues the method and principles of the well-established mechanical and physical sciences and in this blind pursuit it has lost its soul, its mind and its consciousness. Its steps are too measured and careful, lest it should lose its status as a science. As Tyrrell has put it, "Psychologists, perhaps, feeling that they have to protect the reputation of a comparatively new and growing science, are more on their guard than physicists, whose science is too firmly established for its reputation to be in doubt" (*Science and Psychic Phenomena*, p. 341). There is, I believe, time now that we should, even if it comes to that, make a sacrifice of this false honour and prestige at the altar of love and search for truth. Our aim as psychologists should be to know human nature as completely and fully as it is possible to man, and for that purpose to explore all possible regions—normal, abnormal and supernormal. All the ills and sufferings of life are rooted in limited and therefore wrong view of human nature. We need a more profound and comprehensive knowledge of man than we at present possess. Psychology should be equal to this great task, and should take the earliest step to open a new branch of it, namely, Supernormal Psychology, which will not only study the facts and phenomena discovered by the western Psychical Research but also the different types of phenomena connected with the practice of Yoga, which are very common in India. Konstantin Oesterreich is right when he says, "European mediumship is the gift of chance—certain persons evince abnormal parapsychic phenomena, we know not how and when. In India the problem of the methodical production of such faculties has apparently been solved for centuries. Despite the urgent necessity we are still without any really scientific investigation of the Indian ascetics, fakirs and other abnormal personalities. It is hard to understand and regrettable in the extreme, that the Society for Psychical Research..has not yet made any effort to do so....It is no less astonishing that Indian doctors have not yet devoted themselves to the study of these problems. As universities exist in India, we might naturally have expected them to do so." (*Occultism and Modern Science* p. 166).

ON THE DIVISORS OF A MULTIPLICATIVE SET

By V. RAMASWAMI, M.A., Ph.D. (Cantab.)

Introduction :—It is well known that, if d (n) denotes the number of divisors (including unity and itself) of the positive integer n, then

$$(1)\ \sum_{1 \leqslant n \leqslant x} d\,(n) = c_1\, x \log x + (2\, c_1\, c_2 - c_1^2)\, x + O\,(\sqrt{x})$$

where $c_1 = 1$ and c_2 is Euler's constant—and even sharper results are known. The object of this paper is to show that the analogue of (1) is true with an appropriate definition of $d\,(a_n)$ and appropriate values for c_1 and c_2 for any sequence $a_1, a_2, \ldots a_n, \ldots$ with the following properties :—

(2) $a_1 = 1$;

(3) $a_{n+1} > a_n$ for $n \geq 1$;

(4) to every two positive integers m and n, equal or unequal, corresponds an integer p such that

$$a_p = a_m\, a_n\ ;$$

(5) a constant c_1 exists such that

$$F\,(x) = \sum_{a_n \leqslant x} (a_n / a_n) = c_1 x + O\,(1) \text{ for } x \geq 1.$$

Lemma 1. From (2), (3) and (5) follows the existence of an 'Euler's constant' c_2 such that

$$(6)\ \sum_{1 \leqslant a_n \leqslant x} (\,1/a_n\,) = c_1 \log x + c_2 + O\left(\frac{1}{x}\right).$$

Proof. Let $F\,(x) = o$ for $x < 1$.
Then

$$\sum_{1 \leqslant a_n \leqslant x} (1/a_n) = \int_1^x \frac{d\,F\,(x)}{x}.$$

$$= \frac{F\,(x)}{x} + \int_1^x \frac{F\,(x)}{x^2} dx$$

$$= c_1 + O\left(\frac{1}{x}\right) + \int_1^x \frac{c_1\, x + O\,(1)}{x^2} dx$$

$$= c_1 + c_1 \log x + c_3 + O\left(\frac{1}{x}\right)$$

$$= c_1 \log x + c_2 + O\left(\frac{1}{x}\right)$$

where $c_3 = \int_1^{\infty} \frac{O\,(1)}{x^2}\, dx$, and $c_2 = c_1 + c_3$.

Lemma 2. $\sum\limits_{1 \leqslant a_r \leqslant \sqrt{x}} F\left(\frac{x}{a_r}\right) = \sum\limits_{x \geq a_r > \sqrt{x}} F\left(\frac{x}{a_r}\right) + \left\{F(\sqrt{x})\right\}^2.$

Proof. Let
(7) $\left(\sum\limits_{1 \leqslant a_n \leqslant \sqrt{x}} a_n^s\right)\left(\sum\limits_{1 \leqslant a_n \leqslant x} a_n^s\right) = \sum\limits_{1 \leqslant a_n \leqslant x\sqrt{x}} b_n\, a_n^s.$

Then

$$\sum_{1 \leqslant a_n \leqslant x} b_n = \sum_{1 \leqslant a_r \leqslant \sqrt{x}} F\left(\frac{x}{a_r}\right)$$ by distribution of the first factor of the left hand side in (7),

$$= \sum_{x \geq a_r > \sqrt{x}} F\left(\frac{x}{a_r}\right) + \left\{F(\sqrt{x})\right\}^2$$ by distribution of the second factor on the left hand side in (7).

Definition :— $d\,(a_n) = \sum\limits_{a_n = a_r . a_q} (a_r/a_r).$

Theorem :— $\sum\limits_{1 \leqslant a_n \leqslant x} d\,(a_n) = c_1^2 x \log x + (2c_1c_2 - c_1^2)\, x + O\,(\sqrt{x})$

where c_1 and c_2 are the constants occurring in (5) and Lemma (2).

Proof :— $\sum\limits_{1 \leqslant a_n \leqslant x} d\,(a_n) = \sum\limits_{1 \leqslant a_n \leqslant x} F\left(\frac{x}{a_n}\right)$

$$= \sum_{1 \leqslant a_n \leqslant \sqrt{x}} F\left(\frac{x}{a_n}\right) + \sum_{x \geq a_n > \sqrt{x}} F\left(\frac{x}{a_n}\right)$$

$$= 2 \sum_{1 \leqslant a_n \leqslant \sqrt{x}} F\left(\frac{x}{a_n}\right) - \left\{F(\sqrt{x})\right\}^2, \text{ by Lemma 2;}$$

$$= 2 \sum_{1 \leqslant a_n \leqslant \sqrt{x}} \left\{\frac{c_1 x}{a_n} + O\,(1)\right\} - \left\{F\,(\sqrt{x})\right\}^2, \text{ by (5);}$$

$$= 2\left\{c_1 x \sum_{1 \leqslant a_n \leqslant \sqrt{x}} 1/a_n + O(F(\sqrt{x}))\right\} - \left\{F(\sqrt{x})\right\}^2$$

$$= 2\left\{c_1 x\left[\tfrac{1}{2}c_1 \log x + c_2 + O\left(\frac{1}{\sqrt{x}}\right)\right] + O(\sqrt{x})\right\}$$

$$- \left\{c_1\sqrt{x} + O\,(1)\right\}^2, \text{ by Lemma 1 ;}$$

$$= c_1^2 x \log x + (2\, c_1c_2 - c_1^2)\, x + O\,(\sqrt{x}).$$

ON THE UNIQUE FACTORISATION THEOREM

By V. Ramaswami, M.A., Ph.D. (Cantab.)

There are many proofs, more or less sophisticated, of the important theorem that every positive integer can be expressed as a product of primes (greater than unity) in one and only one way. The following proof of this theorem is believed to be the simplest and most direct, and makes use only of the following obvious theorem :—

A :—Every positive integer can be expressed as a product of primes.

Theorem :—Every positive integer can be expressed as a product of primes (greater than unity) in one and only one way,

Proof :—If the theorem is false, let N be the least of the positive integers, which admit of expression as products of primes in two or more different ways. Then obviously $N > 2$, and we also have

(1) $N = p_1 \, p_2 \cdots p_n = q_1 \, q_2 \cdots q_m$

where the 'p's and 'q's are primes and no 'p' is a 'q'. Without loss of generality, we can further suppose

(2) $p_1 > q_1 > 1$.

Now integers r and d exist such that

(3) $p_1 = rq_1 + d$, $r > 0$, $0 < d < q$, and any prime divisor 't', say, of d is less than q_1.

Now consider

(4) $N_1 = p_2 p_3 \cdots p_n \cdots d$

(5) $= p_2 p_3 \cdots p_n (p_1 - rq_1)$, by (3)

$= p_1 p_2 \cdots p_n - q_1 . r . p_2 \cdots p_n$;

$= q_1 \, q_2 \cdots q_m - q_1 . r . p_2 \cdots p_n$; by (1)

$= q_1 . M$ say. when M is an integer.

Here, we have

(7) $0 < N_1 < N$ by (2), (3) and (4).

Hence (4), (6), (7) provide a contradiction, since together with A, they show that the positive integer N_1, which is less than N, admits of two different expressions as products of primes *viz.* (4) which does not contain the prime q_1 and (6) which contains the prime q_1.

The contradiction proves the theorem.

ON THE CONTINUITY OF CONVEX FUNCTIONS

By V. RAMASWAMI, M.A., Ph.D. (Cantab.)

It is well known* that, if a function $f(x)$ defined in $a < x < b$ satisfies the following conditions :—

(1) $\dfrac{f(x_1) + f(x_2)}{2} \geq f\left(\dfrac{x_1 + x_2}{2}\right)$ for every x_1, x_2 in $a < x_1, x_2 < b$;

(2) $f(x)$ is bounded above in $a < x < b$,

then $f(x)$ is continuous in $a < x < b$. The object of this paper is to replace the condition (2) by the less stringent condition :

(3) $\limsup\limits_{x \to b-0} f(x)$ and $\limsup\limits_{x \to a+0} f(x)$ are finite.

Theorem. If $f(x)$ satisfies conditions (1) and (3), then $f(x)$ is continuous in $a < x < b$.

Proof : Let $a < x_1 < b$.

Now, from (3) follows the existence of α, β, and M such that

(4) $M > f(x_1)$;

(5) $a < \alpha < x_1 < \beta < b$

(6) $f(x) < M$ for $a < x < \alpha$ and $\beta < x < b$.

Let now $\delta = \text{Min}\left\{ (a-\alpha), (\alpha - x_1), (x_1 - \beta), (\beta - b) \right\}$ and let

$a_x = \left[\dfrac{x_1 - a}{x - x_1}\right] - 1$, $b_x = \left[\dfrac{b - x_1}{x - x_1}\right] - 1$, $A_x = x_1 - a_x (x - x_1)$; and

$B_x = x_1 + b_x (x - x_1)$, all for $x_1 < x < x_1 + \dfrac{\delta}{2}$ so that we have

(7) $a < A_x < \alpha$; $\beta < B_x < b$, and

(8) $a_x \to +$ es and $b_x \to +$ es as $x \to x_1 + 0$

Now it follows[1] from (1) that for any x_1, x_2 in $a < x_1, x_2 < b$ and any two positive integers m_1, m_2

(9) $m_1 f(x_1) + m_2 f(x_2) \geq (m_1 + m_2) f\left(\dfrac{m_1 x_1 + m_2 x_2}{m_1 + x_2}\right)$.

Now we have

(10) $x_1 (1 + a_x) = A_x + x\, a_x$ and

(11) $x\, b\, x = B_x + x_1 (b_x - 1)$

and note that by their definition above a_x and b_x are positive integers.

[1]Hardy, Littlewood, and Polya : Inequalities.

Hence $f(A_x) + a_x f(x) \geq (1 + a_x) f(x_1)$ by (9) and (10)

i. e. $f(A_x) - f(x_1) \geq a_x\ f(x_1) - f(x))$;

(12) *i. e.*, $M - f(x_1) \geq a_x (f(x_1) - f(x))$ by (6) and (7).

Similarly, we have

(13) $M - f(x_1) \geq b_x (f(x) - f(x_1))$, by (4), (6), (7), (9) and (11). From (12) and (13) follows that for $x_1 < x < x_1 + \frac{\delta}{2}$,

(14) $\left| f(x) - f(x_1) \right| \leqslant \frac{M - f(x_1)}{\text{Min } (a_x, b_x)} \rightarrow o$ as $x \rightarrow x_1 + o$, by (8).

This shows that $f(x)$ is contiouous on the right at x_1.

Now consider the function $q(x)$ defined as follows :—

$q(x) = f(-x)$ for $-b < x < -a$.

This function obviously satisfies the conditions (1) and (3) in $-b < x < -a$, and hence is continuous on the right at $-x_1$. But continuity of $q(x)$ on the right at $-x_1$ is obviously equivalent to continuity of $f(x)$ on the left at x_1; and the theorem follows.

CONTEMPORARY HISTORY AND THE SCIENCE OF GEOPOLITICS

By Professor S. V. PUNTAMBEKAR

EVERY builder of a new world order attempts to create a new social science by basing it upon a fresh reading and interpretation of human history and the factors which go to mould it. In his understanding of the complexities of human life and in his approach to its past course he selects some one factor as the dominant and exclusive or primary factor and either eliminates and subordinates all others in its interpretation. He then finds it easy to build upon its basis and influence certain modes of reasoning and certain lines or laws of human progress or tendencies in historical evolution as inevitable, necessary and desirable or even infallible. This monistic and dogmatic approach to history, and this desire to build a new world order have been very disturbing factors both in properly valuing history and its development, and in smoothly allowing humanity to take a more noble course of cooperation and peace than of intolerance and war (Kampf and Kreig).

Karl Haushofer's 'Geopolitics' is such a new social science and such a philosophy of history. It is similar to Aristotle's Ethopolitics, where State is justified only for good life, to St. Augustine's 'Theopolitics' where State is merely an instrument of God's will, to Rousseau's 'Demopolitics' where State represents the vague general will of the people, to Hegel's 'Metapolitics' where State embodies the mystic spirit of right or real reason, to Marx's Ecopolitics where State is considered as merely a result of economic productive phenomena, to Trietschke's *Macht politics* where State represents only power and its unity and strength and is founded on war and conquest, to Nietzsche's *Hero-politics* where State is the will-to-power of the hero or the superman and nothing else, and to great Britain's *Albinopolitics* and *Ethnopolitics* where the best-State idea and organisation are based on the racial qualities of the Anglo-Saxon White race and are born in Great Britain. All these brands of politics and political thinking are based on the value attached to one dominant factor in the course, development and organisation of social and political life of humanity. They all reject other factors. They subordinate the common man and the larger humanity to the control of either God or virtue or right reason or economic phenomena, or State's will-to-power, or Superman's will-to-

power, or to some myth of racial mission or superiority. In all these the many are sacrificed to the few, or all to some one philosophical or moral or material idea. It is easy to build up sciences and philosophies on unitary interpretation of the course of human life, for they give some unchangeable laws which make it possible to raise definite structures of society and polity and attract. the dissatisfied and discontented to their new message and struggle in life.

Geopolitics builds up a theory of living space and expansion as the foundation on which progress and happiness of a virile people could be permanently built. It claims to be a new study of the influence of geography on history, trying to find out their interrelations and political possibilities. Karl Haushofer who developed this science is a Bavarian. He was born at Munich in 1869. By 1908 he rose to be a captain in the German Army General Staff. In that year he was appointed as a military attaché to a German military mission to Japan. He served there for three years in the Japanese army as an artillery officer from 1908 to 1911. This new position and work proved an important event in his life. It gave him a new out-look on international politics and strategy. In Japan he quickly grasped the presence of two new factors rising in the Far East. He himself was a great student of geography and military history, and easily understood the importance of those two factors. One was the racial factor, the rising power of Japan after the defeat of China and Russia. The other was the geographical factor, the growing influence of the Pacific lands. These were the two powerful elements in the growth of a new world power and a new world politics. He felt that Japan was by her racial strength and political outlook, by her strategic geographical situation, and by her military ability easily going to be one of the great powers in that strategically and economically important area. His stay amongst the Japanese biassed him in favour of the strong Japan and against the weak China. He realised that this Indo-Pacific power-spere with a well-knit and integrated nucleus of powerful Japan and its surrounding favourable geographical environment was slowly awakening and rising for the first time as a great disturbing and moulding factor of the 20th century world politics. It was growing into a consciousness of being one of the largest land and ocean spaces of the world. He stated "A giant space is expanding before our eyes with forces pouring into it which in cool matter-of-factness await the dawn of the Pacific Age, the successor of the aging Atlantic, the over-age Mediterranean and the European era." Japan thus

appeared to him the nucleus of a world revolution in the Far East and the Indo-Pacific Sphere.

In 1911 he composed a doctoral thesis, and in it he dealt with the geopolitical basis and aspects of Japan's military power and political future. In 1913 he published his work on Japan and put forward in it his reflections on Japan's military power and her strategic position in the world and predicted her political potentialities and future. Subsequently also he wrote a number of articles and books on Japan.

Thus his connection with Japan proved to be a decisive date in the formation of his outlook on world politics and strategy. He then began to formulate a new Far Eastrern German policy. It was to be based on co-operation and alliance with Japan. This was to be the foundation and means of German political strength in its aim of becoming a world power. To him coming of a world power was an inevitablility. Politics of the future was going to be the world politics of continental dimensions. Who was to take the leadership in it ? Haushofer wanted his own nation to take that lead, to gain that mastery.

But the terms of peace of the First great world war were very unfavourable to the development of Germany towards that end. It was crippled by the victors territorially, economicaly and politically, from outside. It was split, weakened and demoralised by the rise of a number of parties, liberal, clerical and socialist, from within.

In the First world war he had led his division. It was unbeaten in battle. But after the defeat he had to retire. He felt greatly humiliated and offended at the turn of events and the imposed crippling peace. His intense national pride increased his hatred against the powers which had been responsible for the humiliation of his proud and brave fatherland. It, therefore, made him to rejoice at the rise of non-white peoples like Japan who would one day humiliate and destroy the pride and power of Germany's western conquerors. He felt no hope of recovery or reconciliation coming from them. His state of mind and lines of political thinking can be understood from his following utterance "By a dreadful decision, with consequences of utmost gravity for those who made it, the ocean-embracing cultural and economic powers of our own race have expelled us from their midst. They have left us in no doubt about the fact that only their destruction and decomposition will create another life for us who are now mutilated and enslaved. Thus they have forced us to search for comrades of destiny who are in a similar

situation. We see such companions of disaster in the 900 millons South-east Asiatics. They struggle as we do, for the right of self-determination, against the same oppressors as ourselves, but they fight to some extent with more efficient weapons created by the living conditions of the Indian and Pacific oceans, the arsenal of a Pacific Geopolitics. We see that in these spaces the results of a punishing justice are partly in preparation and partly already consummated, to be felt by our merciless economic and political enemies and oppressors." This extract from Professor Haushofer's "Geopolitics of the Pacific Ocean" gives us the whole of his Geopolitic philosophy, its origin and nature and aims. It originated in the hatred caused by the humiliation of the peace imposed after the great war. Its nature was to be in alliance with those who are suffering similarly in the East and struggling for independence. Its aims were the destruction of its enemies and past conquerors. Its hope was based on the geopolitical destiny of coming world events. He looks to the awakened peoples and powers of the East or the Indo-Pacific sphere in his hope of political salvation for Germany. "Thrown back upon the minimnm of existence, driven from the sun into the shadow, cut off from this free sea and even deprived until 1936 of free traffic on our own rivers, the Germans find two thirds of mankind as fellow-sufferers on the beaches of the Indo-Pacific space. They long to break the same chains, they long for the same liberation and for the achievements of the highest goal of nations and individuals alike for the free personality governed by its own laws. This is the ultimate reason why the Germans must not loose contact with the Pacific." Thus Germany must not confine itself to the territorial limits imposed on her by the Versailles treaty and be cribbed in its narrow spaces and limits. She must think and feel again in large space terms. She must play her part in the great tragedy of world history in which the people of the largest continent will shake off the yoke imposed on them by the sea-powers.

In 1919 he left the army in which he was Major-General, and accepted the post of a Professor of Geography and Military Science at the University of Munich in his own province of Bavaria. Here he felt himself called upon to search for the causes of his country's failure in the great War and to find out the ways to retrieve the disaster, and to restore his people and country to her former glory and world position. He soon realised that unless the sea-power and naval superiority could be wrested from western powers by direct naval conflict and warfare, or superseded and overcome in some other way it

was not possible to achieve his aim. Success in direct naval warfare seemed and proved to be difficult. Therefore another way must be found out to overcome the seapowers. This he found suggested in the writings of Sir Halford Mackinder, a British Geographer who suggested the strategical and political importance of the great continental area of Eurasia in the world politics of the future.

The writers who may be counted as his immediate predecessors and from whom he borrowed some of his ideas may be classified into three classes,—(1) racialists, (2) geographers, and (3) historians, politicians and militarists. H. S. Chamberlain and Hans Gunther developed the German race theory, and ideas of its purity and mission. Friedrich Ratzel and Sir Halford Mackinder stressed the importance of large-space conceptions and continental politics. Moeller Van Den Bruck and Dietrich Eckart advocated the ethnocentric brand of German political chauvinism. Alfred Rosenberg created a racial philosophy of history and a world ambition for the Germans. Treitschke and Bernhardi preached power politics and German superiority.

But the writers who influenced him most were geographers. Friedrich Ratzel, who had been a professor of Geography at Munich University, had investigated the laws of the growth of states and nations and had proclaimed on the basis of his studies that every people must be led from smaller to larger space conceptions and that the decay of every state had been the result of a declining space conception. People flourished only so long as they constantly thought in terms of large spaces. They should not think in terms of circumscribed boundaries of States. It was he who first created and preached the gospel of "Lebens-raum" (living space) and justified it to the Germans. Pan-Germans transformed Ratzel's conception of Lebensraum into a powerful political slogan as well as a strategic device and a rationalisation of political conquest and warfare in their Drang nach Osten policy.

The importance of geography in the world balance of power was first largely stressed by Captain Alfred Thayer Mahan. He as a professor at the Naval College in Newport published in 1890 "The Influence of Sea power upon History 1660-1783." In this book he emphasized mainly the idea that since earliest times those who controlled the seas controlled the world. He again illustrated this observation in his new book "The Influence of Sew-power upon the French Revolution and Empire" in 1892. This idea of Mahan im-

pressed Sir Halford Mackinder, the director af London School of Economics, He was a geographer. He studied Mahan's ideas in relation to geographical maps and arrived at a new and revolutionary historical conclusions. These were that the most important wars in history were the outcome of the pressure of the land-locked peoples of Eastern Europe and Central Asia on those with access to the oceans, and that at the root of most struggles for command of the seas was the constant desire of emigrants from the land-locked regions to win sea-power from those who had already had it. These observations he published in his brief treatise "The Geographic Pivot of History" in 1904. In his "Democratic Ideals and Reality (1919) he stated that Europe, Asia and Africa constitute the world-Island, within it there was the Heartland of Central Eurasia. This must be controlled politically for the sake of world-power. He who commanded Eastern Europe would command the Heartland. He who commanded the Heartland would command the world-Island, and he who commanded the world-Island would command the world. To him this was the reading and the message of geography. His heartland extended from the Volga river in Russia to the Kolyma in Eastern Siberia and from the Himalayas, the Upper Yangtze and the Amur rivers to the Arctic ocean, This territory was invulverable to any sea-power attacking from surrounding oceans.

His most important observation was however that the ultimate threat to British Sea-power would come not from another sea-power, but from the great land-locked regions of eastern Europe and central Asia, which he considered to be the heartland and pivot area of the geographical and political world. He believed that it was possible for a power in possession of that area to conquer the rest of the world-Island of Europe, Asia and Africa, and then to proceed to acquire the command of the sea and the rest of the world. According to him sea-power alone was powerless to prevent this development, and therefore in the interests of his own country England he felt afraid of a German-Russian alliance.

Friedrich Naumann who had accepted Ratzel's ideas of Lebensraum published a book called Mitteleuropa' in 1915. It was a grave political treatise in which he discussed the future of Europe. He argued therein that the grand lesson of the war was that the day of small and even moderate sized states was over and that only large units could survive. A naval blockade could only be withstood by a large productive area, such as the British or Russian Empire. It was necessary to think in continents. Germany was too small a

unit. A middle Europe was a necessity, for it alone could ensure the security and the survival of the German nation. The future lay with world-States and his book embodied Germany's will-to-live, and will-to-power.

These ideas were further developed by Professor Rudolf Kjellen of the Gothenburg University of Sweden. He connected Ratzel's *Lebensraum* to Mackinder's *Heartland theory* and also to his land-power versus sed-power theory, and thus indicated the road to German world domination. His lebensraum for Germany included a larger area, namely, Scandinavia and most of the Near and Middle East as well as Central and Eastern Europe. It was Professor Kjellen who coined the word 'Geopolitics.' He argued that without the destruction of the British Empire and the conquest of Russia Germany's world destiny could not be achieved. He believed that Germany's strategic position in the European peninsula gave her a favourable chance of domination of the 'heartland' of Mackinder.

Haushofer imbibed greedily these ideas and interpretations of his predecessors, studied them with the help of maps and developed them into realities of a new science, called Geopolitics. With his predecessors they were merely vague generalisations and were meant to be simple warnings and exhortations to the German people. He made them into an applied and precise science. He worked out all possible details and implications of its principles. He took fully into account the changeableness of the world as a political phenomenon. He showed a great flexibility in trying to understand its complex dynamic realities. In this way he built up this science and an enormous following of young historians, politicians, economists and students who made geopolitics their life study. It is stated that he has associated with him one thousand scientists and technicians who help him in collecting information and making observations and thus in developing the nature, scope and technique of his geopolitical science and philosophy of applied politics. He has brought a new outlook and light to illumine the nature of contemporary and coming word politics and has created a new techinque to direct its course and to achieve its objectives. His mastery over his subject is stupendous. His information and study are beyond comparison. His suggestions and directions are revolutionary. He possesses an extraordinary creative, fresh and original mind. Though he had borrowed some political ideals and geographical ideas and attitudes from his predecessors, geopolitics as a new subject of study is his own creation. It

attempts a new solution of world politics. His approach is typically objective and scientific. He does not address himself to race-fanatics or indulge in Nordic and Aryan race myths or invite missionaries of any religion or civilisation or Kultur to start a new *Kampf* or *Haas* to attain his objectives. To him geographical facts are of primary importance in the study and direction of world politics. Possibilites of continental areas and groups are the foundations and keys of his sciences.

The great geographical fact of the post war period is that the sea-power has lost its preeminent position as the determining factor in world politics. The development of the motor vehicle, the tank and the airplane have revolutionised the means of communicatian and the stategic lines of sea-power. Sea-communications which are easier and more plentiful than rail-communications have lost their importance in favour of land-communications by airplanes within vast land-continents. The strategical balance is now developing in favour of them. Therefore land and air powers are getting equal to sea-powers. This revolution is due to the development of gasoline engines and their use in land transport and aviation. Due to the speed and character of aviation territorial boundaries of nations and continental geographical obstacles of mountains and deserts have lost their barrier and security value.

The other great fact of revolutionary importance is the development of chemical synthetics during the last 30 years. Several processes for making gasoline from coal have been invented. This has helped in making up the deficiencies of small oil reserves of Europe. Other commodities that are greatly necessary in war and are not available at home are also produced by synthetic chemical processes. Consequently the naval blockade of sea-powers which control the seaways, and the oil, rubber, tin and other essential and useful colonial resources can be withstood more successfully. For Germany chemical synthetics are very essential since she lost her colonies and because the area which she contains and controls lies to the west of the Heartland of Eurasia proper and is much poorer in these resources than the Heatland itself.

The third fact of important consideration is that small states cannot take advantage of modern technology as they cannot themselves provide the mental and material resources which are necessary for its adoption. Technology can work well only in large and resourceful countries possessing a drive, power and technique to utilise it. Consequently small states

are unable to guard their own independence in face of superior powers which are more mechanically and scientifically equipped and advanced, and they cannot make use of the new technological developments for their own welfare. Their continued existence as separate sovereignties in modern times is quite unjustified from the point of view of an inherent lack of power for maintaining independence and promoting material progress of their own peoples. Therefore their forcible elimination or voluntary withering away is necessary, desirable and also inevitable in the interests of world unity, peace and progress, and hence justifiable. The existence of small states is an anachronism and an obstacle, and becomes a centre of mischief and disturbance in the hands of the present rival and self-interested powers who are only concerned, in the interest of balance of power, with maintaining the existence of small or weak states in the world.

The fourth but more important and reassuring fact to the Germans is that the British Empire which is based on sea-power and which has long sea-lines of communication and great colonial resources and commitments to guard contains the seeds of its own destruction. Three powerful factors are contributing to that fact. The rise of great rival powers like Japan and Germany, the growth of national independence movements in the colonial and coloured world, and the rapid improvement in overland means of communication have made the ocean links and naval bases of that empire comparatively weaker and its hold on the resources of the colonies less secure. It would require larger land, naval and air forces at key-points and strategic bases, and also in Great Britain itself which was not now militarily invulnerable or navally unapproachable or economically undestructible with the help of new air and submarine power. This would therefore divert and divide its military, naval and aerial fighting strength and thus increase the possibility of the piecemeal destruction of her sea-power and colonial strength in human and material resources by a large scale war of attrition at sea by means of submarines and airplanes, and by an alliance with the great naval and military power of Japan.

Haushofer had already imbibed from Mackinder the idea that Japan and Germany were two stations-one in the East and the other in the West-on the 'inner line' of the Heartland of Eurasia. In the new age of motor vehicles and airplanes the geographical position of these continental powers gave them decisive advantage over the aging seapowers. Between these two powers was the Russia and China bloc—the geographical

pivot of history and the heartland of the world-island. Therefore Japan and Germany must reconcile themselves to this bloc or they must subjugate it. Haushofer believed that if Japan and Russia were united in East Asia they would be invincible. This would give Japan complete security from the continental side and leave her free for action in the Indo-Pacific area. Similarly if Germany were to reconcile herself to Russia, then they would be invincible in East Europe and the Near and Middle East, and leave Germany free for action against Africa. Thus Japan, Russia and Germany in alliance would create an Eurasian continental organisation stretching from the Rhine to the Amur and the Yangtze. This, he proposed, should be the grand strategy of the future. The 'innerline' therefore of Japan and Germany must be held in peacefnl collaboration with the powers of the "Geographical pivot of history" That is, Japan and Germany must aim at peace and friendship with Russia. It was necessary for them to come to terms with it. Consequently Japan should solve her problem of over-population and economic wants by political expansion into the rich territories and islands of the Indo-Pacific area.

He visualises the new world-struggle not as between the nomads of deserts and steppes and the settled population of agricultural areas, but as primarily a clash between the pirates of the steppes and the pirates of the sea, both of whom want to subdue the cultivators of the fertile soils and possessors of fertile resources. Other peoples and countries are merely powers and possessions in this game of world politics. Therefore he is very much interested in building up a solid bloc of three powers stretching from the Atlantic to the Pacific and in linking up the great spaces aud resources of Eurasia and the Indo-Pacific area to the small spaces of Germany and Japan and to make them eventually the dominant powers in the coming world order.

He has constantly praised the Japanese for their military virtues and large space consciousness. He sees that the Japanese will-to-expand and will-to-conquer was bound to lead her to attack the white empires of Eastern Asia in order to create her own empire in the Far East. Japan which occupies a strategic position in the economy of the Pacific area is connected more or less directly with all the states bordering on the Pacific waters. As seas do not divide but unite countries in modern times, the new Pan-Pacific outlook in the economic and plitical consciousness is a new phase of world politics.

Though he thus recognises the geopolitical importance of Japan he does not lose sight of the possibility of Japan's tragic failure in and against China and Russia if she were to enter on a campaign of their conquest. Similarly in the case of Germany attacking Russia he sees a like possibility. Therefore he has advised both to live in peace or come to terms with Russia, China and Japan.

In 1924 Haushofer established an Institute for Geopolitiks at Munich and collected a large number of ardent scientists, technicians and investigators to help him. The Institute publishes a large monthly journal called Zeitschrift fur Geopolitik. Its contents give an insight into the nature of the work done in connection with its facts-gathering and facts-studying activities. Moreover it maintained an extraordinarily complete string of correspondents in strategic places and areas throughout the world before the out-break of the present World War. Professor Haushofer delivers lectures at the Institute and they are largely attended, and his ideas and information are greedily imbibed there especially by military officers, soldiers and students. He does not believe in any dogmas. He steadily keeps in view the constant changes which are taking place in the political world and which affect his own tentative schemes. He does not propose to give any permanent or final solutions of the problems he studies. If conditions and forces change he revises them. His fixed aim however is Germany's success. He has only developed a set of guiding principles and shown a group of geographical facts and forces which should control action in a given situation. He has indicated the weapons for immediate objectives in order to attain later on the general objective. He has written very voluminously on international relations and power politics and it is stated that he has made few errors of judgment. This Munich Institute and Geopolitical School are unrivalled in the high quality of their international studies, surveys and maps, and are the most efficient fact-digging and information gathering machine ever devised. The Geo-political literature he has created in the monthly surveys of his magazine is large. Each number contains from 1500 to 4500 words on the topic. Each issue contains an editorial by him on the Indo-Pacific sphere. His studies primarily deal with the relationship between geography and history, by studying every field of human activity economics, politics, foreign policies, naval, military and air war-fare, forces and developments, war industries, systems of communications means of transportation, population, languages, laws, customs, newspapers, radio-broadcasts, colonies, raw materials, oceans

and terrains, everything that men do and which influences their actions largely are all considered as parts of history and as deeply affected by geographic factors. On these subjects the Institute has carefully collected enormous data. They relate to every phase of human society and activity.

His early works deal with "Indo-Pacific Sphere". In them he approves of the Japanese programme of "Greater East Asia", which is, as it were, the prototype of the "Greater Western Eurasia" of Germany. In 1924 he published his famous book "Geopolitik Des Pazifischen Ozeans" (Geopolitics of the Pacific Ocean). It is considered to be the Bible of German Geopolitics. His greatest and most important treatise however is *Macht und Erde* (Power and Earth) published in three volumes in 1927. It was followed by Wehr-geopolitik (war geopolitics) in 1932, a booklet of 138 pages addressed to soldiers containing a summary of his views on Geopolitics. Then came his most popular book "Welt-politik von heute" (World politics of today). He has also published 30 special studies on the Indo-Pacific spaces besides his regular monthly reviews on the subject in his Journal. All these books and studies analyse very carefully and expound lucidly the ideas of German Geoplitics in general and of the Pacific Geopolitics in special.

The argument of this master Geopolitician and his scientists runs as follows. The whole world is today the battle-ground of forces contending for the mastery and political unity of the world. In a period of world war the entire earth becomes a theatre of war. Therefore all the details of its geographic configuration, namely, continents, islands, peninsulas, oceans, bays and gulfs, seaways, waterways, and airways, landmasses, deserts, forests, mountains and valleys, climates and temperatures, winds and seasons, etc. have to be carefully studied and used in the strategy of world war and power. This combination of geography and strategy on a world scale is indispensable to rival powers which seek to win or keep a world position. To this end also the foreign policy of nations has to be directed and developed. They must acquire geographical means for winning victories. Therefore accurate and intelligent surveys and maps of all the lands and peoples and of their geographical realities and geo-political importance have to be made and utilised, and their political relations and possibilities have to be well understood and stated. These studies would give them practical knowledge of the foundations and weapons of power and of the laws and forces that govern the rise and fall of states. This is the scope of the new science of

geopolitics which is ment to be a powerful weapon in the grand strategy of the new world struggle. The real essence of geopolitics therefore lies in a thorough study of geographical facts and their importance as decisive data for the diplomacy and strategy of power politics. It does not view geography in terms of scenery, or of its influence on human types, or of topography and resources as bases of livelihood, or of boundaries and areas of national jurisdictions, racial habitations, or religious homelands. Geopolitics views geographical facts namely, land masses and sea channels, mountain and valleys, material resources and ways of communication, continents and oceans, even territorial beliefs and customs exclusively from the point of view of world power and world war, and estimates their likely effects on them, It also deals with the "living space" theory and Heartland and world-Island theory from that point of view.

Every powerful nation will have its geopolitics or world politics. There is no such thing as a general science of geopolitics because it is based on national aims which differ and change. Therefore it does not and can not have one definite and dogmatic form. It depends upon the world outlook, the world position and the world strength of the aspiring nation at a particular time and situation. There can be as many types of geopolitics as there are conflicting states, struggling under geographical conditions which differ in the case of sea-powers and land powers. The German geopolitics of Haushofer has evolved its own values and ways of seeing, thinking and acting on a global scale. It has a typical German Weltanschaung with its own principles, practices and interpretations.

Thus we see that geopolitics is something more than political geography. Political Geography is merely concerned with the description of the state space as it is, that is, its location and extent. It investigates mainly the actual physical conditions which prove important in the relationship of state and its economic life and political security. It is a static study of what is. It never asks and inquires into dynamic questions, the political possibilities and economic potentalities of adjacent geographical areas. Political geography is a limited study. Geopolitics is a study of the whole world geography and its global importance in relation to the dynamics of world power politics. It investigates the life circumstances within a state and between states in their relationships of space and power. "The difference between geopolitics and political geography lies in the fact that while political geography is only the investigation of conditions,

geopolitics asks an outspoken dynamic question," that is, about expansion and power. There is no element of any strict geographical determinism in it. It uses geographical facts for power politics. Thus geopolitics may be considered the geographical foundation of the art of political action in the struggle of states for existence and 'lebensraum'. It deals with large space economics and continental politics, with the control and possession of means of communication, colonies and resources and markets as sure means towards national existence and security, power and living space.

Geopolitics is thus primarily a dynamic science of war geography. It wants to out-flank the oceans and defeat the sea-powers by the control of continental spaces and their coastlines and ports. According to Haushofer "Geopolitics is aimed not only to get everything ready for as wide as possible a realisation of power in the realm of space for the art of politics, it has also to present its findings ready for immediate political use. This explains why geopolitics has to work on a much broader basis than that of mere political geography. State theory, economics, sociology, the political science of the United States, the lessons of history, of the law of nations, the public law, and the field of law in general, all have to contribute to the structure which is erected not only to shelter the past, but also to carry the fundamentals of the future. The scientific basis of Geopolitics must be constructed for the requirements of the future, and with the courage to predict the future." Thus his main aim is to make this science a precise instrument of world conquest. His task is however very specific. He lays down the lines of actual politics for Germany from this view point. He not only attempts to secure her national interests in the midst of an inevitable conflict of great powers but also to advance them from the point of view of gaining world power. The strategy of war is one of the most important branches of the science of geopolitics. War is its experimental workshop. It wants to find out how warfare is vitally influenced by the earth's surface. Its ideas of blitzkrieg or the swiftest possible destruction of its enemy's armies, of encirclement of the enemy etc, are a part of this science. No doubt, Haushofer's school takes great interest in the problems of the earth from a definite weltanschaung of its own. But it sees all its problems from the dark background of the Versailles Peace and post-war Germany, and the treatment it experienced at the hands of her victors.

Geopolitics does not admit the right of small nations to self-determination. According to it "every people must be

educated up from smaller to larger space conceptions." Haushofer is fully convinced of Ratzel's idea that a declining space conception brings decay to the State. He is of opinion that Germans must learn again to think and feel and act in large space terms and not merely in terms of their restricted homelands. He advises them to play their part in the tragic but inevitable course of world-history in which the people of the largest continent will remain independent of the control exercised by the sea-powers over their economic and social life and political expansion. Europe as a whole has been paralysed by small space conditions and conceptions of small tribal nations and cultural groups. English politicians have steadily encouraged this reckless growth of small independent nationalities in Europe and America in the 19th century, and have set them against one another as neighbours. Haushofer traces the lines of the same policy being followed and encouraged in Asia in the 20th century. A host of small territorial groups are being carved and created as independent units out of old larger historical units in western, southern and eastern Asia in the name of religion, race, history and minorities. This is the true nature of British imperialism and world politics based on the conception of balance of power but camouflaged in the name of self-determination and rights of minorities. It has weakened and split up historically united people and set up conditions of civil wars in them. Thus she has gained her own dominance and maintained it with the command of sea-ways and colonial resources, finances and markets. Therefore Haushofer believes that Indo-Pacific countries, fearing the same fate of being splitted up into small conflicting territorial units, look out with increasing confidence to some great power like Russia, Germany and Japan for help. He thinks that the struggle of the Turks, Arabs, Indians, and Chinese is going on to prevent this political fatality and to liberate themselves from foreign rule, domination and exploitation. This is the immediate objective of their geopolotics. Therefore the geopolitics of Russia, Germany and Japan lies in helping and associating with them. This instinct against partition of great historical units into smaller artificial units and against domination and exploitation by foreigners has become a living force in Asia, and the clever tactics employed in raising the cry of artificially fostered minorities and small nationalities has to be exposed. These tactics have awakened the self-consciousness of large historical entities and natural geographical units like China, India and Arabia to their historical heritage and geographical destiny. These great cultural units are bound together by the traditions of their people and by the influences of their soil.

Along with German historians Haushofer believes that the cultural center and dynamic sphere of Central Europe, that is, Germany, has been tormented and prevented from uniting and expanding for long by France and Britain. She has now become conscious of a world-embracing destiny and order. In this new world out-look (Weltan-schaung) which she has developed she feels that she will be liberated from artificial isolation of narrow statal and national boundaries, and that she will thus enter into the new community of large spaces of the earth, namely, the Indo-Pacific monson lands containing 900 millions of peoples who are struggling for political self-determination of their large space historical homelands and holy lands.

We must here understand that Haushofer does not seek to create a white bloc of white races and impose their rule on the nonwhites. He says that the white bloc conception was smashed by those who used non-white troops and peoples in the last war to keep down Germany-a white race. Therefore Germany is justified in joining and sharing in the geopolitics of the Eurasia and Indo-Pacific sphere not only on political but also on ethical grounds. He also thinks that France and England are not really white powers. Their empire is over the coloured. They rule and employ uncultured coloured races to oppress and oppose white races of Europe. Therefore Germany must help in liberating cultured coloured races who are struggling and rising against their white oppressers and thus create and hold the strategic lines of a future geopolitics of the Pacific. This policy alone will give Germany a chance to share actively in the world resources and in the world politics of large spaces from which she has been wrongfully displaced in the last war.

Behind the geopolitics of Haushofer stand Germany, Russia and Japan, the three associated powers as partners of an axis in a world undertaking. In this way he attempts to link up the great spaces of Eurasia and the Indo-Pacific sphere to the small spaces but powerful peoples of Germany and give her a new world outlook and a new world politics which is, in short, the substance and aim of his geopolitical thought.

His geopolitics is not a trivial something to be lightly dismissed. It is a powerful conception and instrument in the hands of Germany. It is essentially an attempt to overcome Anglo-American seapower and their world expansion and control by the new technique and strategy of the land and air power of Eurasia. From this area-the heartland of the world-

Island she can build without interruption a large land air-force strong enough to control or conquer the world-Island of Europe, Asia and Africa. Then she will easily destroy the strength of sea-powers by depriving them of their naval bases, coastline control and large resources and supplies of war materials, and then she will be able to create her powerful fleet to crush finally the resistance of the enemy sea-powers.

Haushofer was greatly attracted towards Japan from the date of his first stay in 1908. Then after the loss of German claims and territories in the Far East after the First great war and of German foothold in the Pacific he was led still closer to Japan, as then German and Japanese vital claims and political interests did no longer overlap or cross each other anywhere. He could therefore advise Germany not to oppose the Japanese cry of "Asia for the Asiatics". He on the contrary advocated a policy of close cooperation with Japan on the basis of a "symbiosis of cultural politics." This meant that a permanent union should be established between them, each depending for its existence, security and expansion on the other.

He regarded Great Britain after the Great War as Germany's greatest enemy politically, economically and culturally. His Anglo-phobia made him advocate an alliance with Japan, and rapproachment with Russia. Both of these countries were obstructed in the fulfilment of their political ambitions and ideologies by the geographically adjacent but antagonistic imperialism and capitalism of Great Britain.

He has done a lot of propaganda to spread his new ideas. He has attempted to educate the German peoples through his books and writings to take a global view of politics as he understood it. In 1936 he was preaching "do not be small minded, but think in broad terms of large spaces, of continents and oceans." Much earlier in 1923 he had come in contact with some members of the new Nazi party. Rudolf Hess who was his aid-de-Camp during the first world war had escaped arrest during the Beer Hall Putsch through the agency of Professor Haushofer. He hid Hess with some of the Nazi archives on his own estate. After his escape Hess used to attend Haushofer's classes and became one of his disciples at the Institute. He eagerly imbibed his geopolitical ideas. He also met Hitler in jail through Hess. His ideas influenced Hitler and became a part of his *Mein Kampf*.

It is said that German-Japanese Anti-Comintern Pact of 1936 and the Russo-German Pact of 1939 were Haushofer's greatest successes. He in his joy proclaimed "never again shall

Germany and Russia endanger by ideological conflicts the geopolitical foundations of their adjustable spaces."

Are there any limitations on or flaws in the geopolitical interpretation of history and politics ? Besides the influence of geographical factors, of techinical and scientific developments, of military and aerial power there are other imponderable forces which may turn the course of events into a different path. Certain spiritual, moral or economic values of life, certain social ideals, and certain historical outlooks and associations may prevent alliances and create clashes and conflicts between adjacent nations and continental areas which are geopolitically natural allies, or if they succeed as allies in any great war they may wrangle and fight over the distribution of the gains-territorial, economic and strategic made during their temporary alliance.

Therefore the question naturally arises, is geography the sole or primary determinant of the course of history as the geopoliticians believe ? It no doubt is a great factor but not necessarily the sole determining factor. The relegation of man and his social ideals and spiritual beliefs to a secondary and subordinate place is not tenable. There are equally weighty factors economic, social, political and historical, which influence and mould the course of human events or history. There are violent and aspiring nationalisms, bigoted and inspiring spiritualisms, fanatic racialisms and alluring socialisms which cross the course of history and potentialities of geography, create visions and lay down paths of larger world orders or pan-territorial, racial or religious blocs on a continental scale, and thus turn the current of geography and history.

Moreover, one single people or nation, however greatly endowed, scientifically equipped and technically organised, and aspiring for such a world dominion, can not prove equal to the task' because of its own mental, moral and material limitations in face of the power and resources of its temporarily all ed and united opponents. If it allies itself with others for such a task, then that fact itself is a limitation upon its power. Besides there is always suspicion, hatred and opposition inherent in the temporary alliance itself. Mere success in the war alone will not solve the problems of peace, namely, political authority, economic distribution, cultural freedom, social and political relations.

Economic or geographical factors alone do not explain or create historical changes or social rovolutions. Land does play an important part in making history, but we cannot

neglect purely human factors, man's nature, ideals, creeds and objectives, his social and economic conditions and historical developments. Territory can not completely subordinate man and make him a tool. The unknown possibilities of geographical factors are not one but many. It is man alone who can make any one or other of them real to suit his ideals, ambitions or objections. We must, therefore give full and equal consideration to the higher forces of human life and to the value of man's individual freedom and the spirit of his social outlook and not ignore them to suit the inexorable demands of any pseudo-scientific and purely materialist thinking. Men would not give up every human ideal or value of life to bow down before the power-aims and war-strategy of gepoliticians. Nations do not become merely slaves or objects of dominant geographical factors. They find ways to escape the forces of geographical determinism.

To me Geopolitics seems to be primarily a science of war strategy and foreign policy meant to achieve world domination, being based on certain major facts of world geography and their clever utilisation. It is a science of organisation of means and not of organisation of ends. It generates a geographical materialism and determinism to suit the philosophy of racial destiny and domination and neglects higher ends and values of human life. It only creates an extreme longing and fond hope for larger living spaces and for political expansion without any scheme for the ordering and organising of higher human life as a whole on the basis of justice, freedom and happiness equal to all. In practice it becomes the mission and mysticism of the blood or race, a mission and mysticism of the soil or geography. Both play the role of myth in history.

Geopoliticians are primarily expansionists and militarists. Their patriotism is bellicose and war-mongering. Their humanity and world-outlook are jingoistic and absorptive. They pander to the intensely chauvinistic spirit of the nation.

THE PLACE OF PANCHAYATS IN RURAL ECONOMY[1]

By N. M. KULKARNI, M. A.

"THE outlook for mankind", writes H. G. Wells in *The Salvaging of Civilization*, "is a race between education and catastrophe." Obviously any proposal towards the formation of happy human communities must be based on a sound policy of public education in the widest sense of the term. Such a policy would be a long-range one, aiming at the creation of a sound public opinion the effect of which would be seen in the vitalisation of human intelligence. Economy in essentials is the application of existing means to ends whether we adapt these to rural or urban problems. It is clear that in the adapting of means to ends the intelligence of a given group of human beings is the deciding factor. State policies in regard to welfare problems of the community will be judged in relation to the facilities they provide in making the maximum use of community intelligence towards administrative and constructional activities. If we examine the reactions of the people to those policies where the principle of decentralisation has been assumed we will find that such policies do not work as they should because the people at large are not aware of the good that the particular policies contain. And where they are they lack the power or the intelligence to effect the proposed reforms. This is time and again evidenced in the reports, official and non-official, furnishing the actual results of local self-governing bodies in our country. If we summarise these various reports we find that on the whole the officials complain of the apathy of the people themselves, and non-officials deplore the ignorance of the officials in regard to regional conditions. The result of this is that while the rulers point out to the necessity of educating the people, the people themselves, in the words of Disraeli, 'wish to educate their masters.' The outlook, therefore, for Indians to-day is really a race between education and general progress!

In relation to the requirements of our country the present method of education is inadequate because we are trying to build from the top instead of from the bottom. No proportion is maintained between the University training and the Primary and Secondary ones. This is particularly apparent in the province of Agricultural education. If, as is emphatically assumed, India is a country where people live predominantly

[1] Awarded First Prize in the Panchayat Prize Essay Competition organised by the Director of Panchayats, Government of the Panjab, 1942.

in rural areas, it is obvious that education in rural subjects should be dominant over that in urban requirements. As it is, we have only 7 Agricultural institutes including that of Pusa (now in Delhi) and 17 Agricultural Schools (according to the *Indian Year Book* for 1941-42). As against this there are 289 Arts Colleges described as recognised institutions. These figures show the present trend and they belong to the period when the principles of Local Self-government, both in urban and rural areas, have been working for a considerable time. It is no wonder that the country at large is but faintly influenced by the progress made in the field of rural polity or economy.

The two master requirements of Indian Rural Economy, as Dr. Beni Prasad rightly points out, are: (1) "to revitalise the village as a community and (2) to draw the village into the full orbit of life through universal education, improved sanitation, improvement in transport, modernization of agriculture, wherever necessary, through consolidation of holdings and, wherever feasible, through collective cultivation." It is clear, therefore, that any effort at rural reconstruction should begin from the bottom, taking the village as the smallest territorial unit for the purposes of administration and constructional activities. Such recognised regional units of village governments existed in India in the past and, as is confirmed by the various enquiry commissions, they are found to be working in the present in the different provinces of India. This apart, it has been brought to the notice of the various commissions that whenever there was a scheme of welfare which the Central Government wanted to introduce in a given area the means of translating the particular scheme have frequently been found in the existing, although ill defined, rural agencies which have rendered efficient service when requisitioned for the purpose. It is instructive in this connection to quote the observations of the Famine Commission of 1880 which reports that "in most parts of India some village organization exists which offers a ready and natural, though still imperfect, machinery for coping with famine, and it is of special importance that whatever is possible should be done towards improving and strengthening this machinery where it is present, so that it may become more thoroughly efficient for the purposes of village relief." The fact that such units of regional service are available for the purposes of rural reorganization should be a pointer to the reformer of rural India with a realistic approach to this problem.

Before, therefore, we proceed to consider the place of Panchayats in rural economy it will be instructive to review briefly the history and the evolution of village governments

in the various parts of India. There is a considerable body of sound and suggestive literature on this subject which has of late been claiming the attention of the best minds in our own country as well as abroad. The past has valuable lessons to teach for the present as well as the future. A lover of paradox once remarked that the only way to go forward is to look backward. In nothing is this remark more true than in the history of village communities all over the world, for God made the country and man made the town. The studies made in this connection by writers like Prince Kropotkin and Sir Henry Maine reveal many suggestive points for the rural reformer of to-day. Since it would be transgressing the limits of our present subject to dwell at length on details, it is proposed to touch only those points that bear directly on rural economy and the importance that regional units enjoyed in the national life of India. It is particularly instructive to note the work done by the London School of Economics and Political Science which has published a very valuable piece of research study in its series of monographs under the title of *Village Government in British India*. In the preface to this work Sidney Webb observes :

> "The fragments of an indigenous Local Government that are still to be traced in Indian village life seem to me full of interest and suggestions. They are, it need hardly be said, easily overlooked. One able Collector of long ervices in Central India informed me that he had been, until a few months before, totally unaware that anything of the sort existed in any of the villages. But being led to make specific enquiries on the subject, he had just discovered, in village after village, a distinctly effective, if somewhat shadowy, local organization in one or other form of *Panchayat*, which was in fact, now and then giving decisions on matters of communal concern, adjudicating civil disputes and even condemning offenders to reparation and fine."

Leaving aside the system of what are known as Caste Panchayats whose jurisdiction is obviously limited within the various castes we may proceed with a consideration of the Panchayat as a territorial unit where several castes co-operate in the administration of villages. But we should also remember that even in the case of the so-called caste panchayats we do find that these also contribute towards the dispensation of rural economy. And we may further note that in one respect at any rate the caste panchayats exercise greater authority over the members of the particular castes than do the village panchayats inasmuch as the sanction behind the former is the will of the whole caste which the erring member dare not defy. In other words the decisions of the caste panchayats are final and there is no appeal to any other tribunal beyond the caste. The fear of being an outcaste in a social context which is predominantly religious is so great and its consequences so fatal that the delinquent is made to abide by the rules and decisions

of the caste panchayats far more economically and effectively than by any statutory and judicial machinery. Another important fact in connection with these caste panchayats is that they are living tribunals with no need of statutory sanction for their effective functions and, therefore, they could be put into immediate activity as the occasion for the same arises. The economy of time and money effected by this consideration is considerable and in the context of rural poverty it plays, needless to say, a very important part.

Coming to the consideration of the regular village panchayats as distinguished, as above, from the caste panchayats we are provided with a considerable body of official and non-official evidence pointing to the fact that these local bodies are in the possession of several vital functions, judicial as well as executive, which affect in no uncertain ways the control of rural polity and economy. The policy of the Central Government in respect of these regional units has been one of periodical patronage which has taken the form of statutory sanctions and privileges. This has been done primarily with the object of easing the pressure of administration and judicial functions. It would appear that the authors of the Reform Despatch of 1908, (Lord Morley in particular) proceeded upon the sound maxim of state polity which assumes that government to be the best which governs the least. Previous to this famous Despatch there had been several stages in the development of the Indian Constitution. These steps taken towards the reforms of the Indian Constitution may be dated from 1858 when the Government of India Act of that year placed the destiny of the country directly in the hands of the Crown. The various Indian Councils Acts passed between the period of 1861 to 1908 further defined the limits of interference on the part of the Central Government. If we look at the recommendations of Lord Morley we come to see that this issue of checks and interference from the Supreme Government of India was the main plank on which the working of the Constitution was primarily based. Commenting upon this relation between the Central Government and the Local Governments the Despatch says:

"If Local Self-goverment has so far been no marked success as a training ground, it is mainly for the reason that the constitution of the local bodies departed from what was affirmed in the Resolution to be the true principle that the control should be exercised from without rather than from within; the Government should revise and check the acts of local bodies but not dictate them.' I have no doubt that the Government of India to-day will reaffirm and actively shape their policy upon the principle authoritatively set forth by their predecessors in 1882. It would be hopeless to expect any real development of self-government if the local bodies were subject to check and interference in

matters of detail, and the respective powers of Government and of the various local bodies should be clearly and distinctly defi ned by statute so that there may be as little risk of fricti on and misunderstanding as possible within the limit to be laid down in each case."

It is thus clear that the reforms in respect of Local Self-government in India have not been successful because these reforms took but little cognisance of the available body of local knowledge and human services existing in the urban as well as the rural areas of the country. The reports of Commissioners of the various Municipal units and also of the District Boards show the truth of this observation. If we summarise these various reports the conclusion will be that the power and responsibility of the non-officials have been less relatively to the power and responsibility of the officials. Since the majority of the people in the country are vitally represented by the non-officials it is obvious that any scheme of responsible self-government must fail which does not take effective measures to ensure the hearty co-operation and services of this vast body of public opinion.

The starting point of public life, therefore, should be the non-official opinion embodied in the smallest territorial units of the country, and these, no doubt, are to be found in the village councils known as the panchayats. This was recognised by the Despatch of 1908 which says: "The village in India (generally) has been the fundamental and indestructible unit of the social system, surviving the downfall of dynasty after dynasty. I desire your Excellency in Council to consider the best way of carrying out a policy that would make the village the starting point of public life." This aspect of policy was further taken up by the Royal Commission on Decentralization of 1908. The relevant portion dealing with this policy of decentralisation is as follows:

"While, therefore, we desire the development of the panchayats system, and consider that the objections urged thereto are for from insurmauntable we recognise that such a system can only be gradually and tentatively applied, and that it is impossible to suggest any uniform and definite method of procedure. We think that a commencement should be made by giving certain limited powers to panchayats in those villages in which circumstances are most favourable by reason of homogeneity, natural intelligence and freedom from internal feuds. These powers might be increased gradually as results warrant, and with success here, it will bocomeeasier to apply the system in other villages.... And there is a considerable consensus of opinion that this new departure should be made under the special guidance of sympathetic officers."

Following these recommendations various local bodies have from time to time been formed in the rural and urban areas of the country. The Municipalities and District Boards are the major examples of such regional governments in the

country. But so far as the villages are concerned precious little has been done towards embodying the recommendations of the Commission on Decentralisation. The only instances where anything like a concrete implementing of the recommendations is observable are the Panchayat Acts passed in the Punjab, Bombay, Bihar and Central Provinces. The Punjab Government, for example, has passed a Village Panchayat Act which enables Government to establish in a village a system of councillors to whom certain local matters, including judicial powers, both civil and criminal, of a minor character, may be assigned. Other governments have followed a more or less similar step in respect of the creation of village panchayats.

The trend towards rural government has been notably pushed forward by the establishment of Co-operative Societies. In many cases it has been found useful to introduce the machinery of village government through the offices of these societies. The intimate relation between rural economy and the Co-operative movement has led these societies to become vital factors in the management of village life in administrative and judicial matters. We will have to consider at length this point while dealing with the question of rural indebtedness which is the most pressing problem of rural economy. For the present we may note in passing that the introduction of the co-operative movement in rural areas has been shown to be an educative factor in the development of the Panchayat movement. The former has served as one of the best means of propaganda towards the establishment of Village Panchayats wherever it has been tried.

The Act of 1919 embodying the Montague-Chelmsford Report transferred the Department of Local Self-Government to the Ministers who were responsible to Legislatures. Here again the question was the control exercised by the Central government over the Local governments. As Sir Reginald Craddock points out in his book, *The Dilemma in India,* the first principle of the Act of 1919 was "that there would be as far as possible complete popular control in local bodies and the largest possible independence for them of outside control." It is singularly intriguing to find that inspite of all these theoretical principles of independence for the local bodies there has been no progress worth the name in the realm of rural economy or administration. We are, therefore, compelled to ask why there has been no response from local units towards a matter in which they are apparently so vitally interested. The answer to this has been summed up in the words of an impartial critic of the present regime of Local Self-government.

"The trouble has been", says this authority, "that the pleaders and townsmen who were the leading men in the District Board, were very chary of delegating powers and allotting funds to the Rural Boards and as most of these people on the District Board seldom or never went out into the district the touch of local knowledge was often lacking.... My constant endeavours in the case of rural areas was to obtain a greater degree of ind ependence for these local men, who had a much clearer understanding of what was required in their areas than the pleaders at the headquarters of the district, who had little time to spare from their professions to devote to the interior of the districts."

So it appears from this brief survey of the several stages of Local Self-government in India that there has been no effective transfer of power and responsibility from the centre to the local units of government. So long, therefore, as this devolution of power and responsibility is not made effective it would be futile to foresee any material advancement of rural polity or economy in the country. Unless we make the villager aware of the fact that his advancement is dependent on his own active response to the situation we will not be in a position to look forward to his all-round development. And this active response from the villager will not be forthcoming, let us remember, unless he feels the responsibility and power to be vested in him. For quite a long time under the British Raj the villager has enjoyed peace and relative security. He has learnt to look up to the powers that be for his means of subsistence and daily life. So profound has been the impression of this security that he distrusts any reform of the existing regime. The various experiments in local self-government have not helped him to expect much from them. Indeed if one were to rely upon the reactions of the villagers to these experiments of local self-government one is driven to suspect that his apprehensions are legitimate enough. It is a fact that the villager is quite intelligent where his own interests are concerned. Let us see if we can inspire in him the ideals of effective self-government taking the village as the unit of administration.

Assuming, then, that the Panchayats have a full voice and power in the management of the villages our problem at present is to ascertain how far is it possible to extend the material resources of the villages so that the villagers could lead a solvent and secure life. This, stated broadly, is the crux of rural economy. What are the outstanding facts of rural economy to-day ? We may find an answer to this in the fragmentation of holdings which are extremely uneconomical. It is not possible to raise the standard of rural life materially under this initial handicap. Any policy of economic reform should be based upon a sound land system, and it is the villager himself who could change this if and when he is made to realise its vital importance. We

should imagine that the village panchayats will be the directors of such a policy of economic land holding. It is clear that the functions of the village panchayat could not be limited to mere matters of local administration. Under the panchayats the whole life of the village or villages should be made the object of their outlook. It is more as a moral and educative force than as a merely administrative unit that the panchayat has to work. In this capacity it is bound to affect the material welfare of the villagers. At present when any model working Farm or other is exhibited to the villagers they are quite impressed with it but they remain passive and unconvinced. They evidently feel that the ideal farm is not for them. If, on the other hand, the panchayat takes upon itself the task of reorganising rural economy it is easy to see that the villager will come to take more active interest in the subject.

In an illuminating lecture delivered under the auspices of the Patna University on the subject of *Rural Economics in India*, in 1926, Sir Alfred Chatterton remarked :

"To influence him (the villager) we must show how these improvements can be worked in his village and on his or a fellow villager's land....There are three elements essential to production—land, labour and capital. It is not an impossible task to vitalise village life and restore to it in some degree the healthy communal sense which undoubtedly existed in earlier times. The main task which lies before the reformer is to get the people to work together on a definite programme calculated to yield specific results."

It is in initiating these 'definite programmes' that the place of panchayats in rural economy is seen to be vital and constructional. State initiative will not convince the villager because the interests of the villager are confined to the limits of his village microcosm. The villager must see in order to believe. The confidence that the local panchayat could inspire in the constituents is of a reassuring type and it is bound to increase in proportion to the actual participation that the villager is made to take in the work of the community. The chalking out of the programme in each case will no doubt depend upon varying local conditions. But there can be no two opinions about the general aim of material advancement in every rural unit whether we make it one single village or, where this is uneconomical, a group of villages. Sir M. Visvesaraya, the sage engineer of Mysore, has said in his *Nation Building* (an address on Economic Planning) that the time has come "to make the effort and to teach the rural population how to help themselves....Our village population wants guidance. Though illiterate, it is very shrewd where its own interests are concerned. With patience and perseverence, from the fourth year onwards, there would be a progressive increase in goods and

services from year to year in every village as well as in the whole district on the whole."

It is evident that the panchayats have before them these constructional activities based on a sound survey of local conditions and backed with the local service to execute the same. Of course the panchayats will have to requisition expert intelligence in respect of particular projects and plans. This could be lent by the state or professional units in the country. What is needed is local enthusiasm and a sense of village patriotism which could be best fostered by the panchayats on account of their intimate knowledge of the constituents and their interests.

We will now consider some of the major and pressing problems which have to be taken up by the panchayats in their dispensation of rural economy. These are summarised by Sir Alfred Chatterton in the following words :

> "The establishment of village plantation for fuel and for timber and the planting of shade trees ; the sinking of wells for domestic water supply and, where there is surplus water available, for the irrigation of garden crops. The arrangement of mutual adjustments of land to consolidate holdings and diminsh the loss due to fragmentation ; the improvement of village roads and means of communication ; the development of co-operation not only in the matter of credit but in any way calculated to increase the amenities of the villagelife ; the establishment of agencies for the sale of improved implements and depots for the distribution of selected seeds and suitable fertilizers ; starting village industries such as brick and tile making ; the making of arrangements for training at industrial schools of village youths in such arts and crafts as are likely to be of use in rural tracts ; the instruction of villagers in general information likely to be conducive to their welfare and the improvement of their surroundings."

This is an impressive and imposing list of items and the panchayats in implementing them will necessarily find themselves in the position of little republics scattered throughout the length and breadth of the country. We have to do our own thinking in the matter. In an article on "University Education in India" which I wrote some years ago I observed the necessity of bridging the gap between the rulers and the ruled. The rulers whom I had in view were of course the intelligentsia of the country trained at the several Universities and Educational Institutions of India. I pointed out that the great mass of educated Indians should be made to go back to the villages and live among the villagers. It is clear that if such a thing were done there would have been more progressive results in the field of Local Self-government because the majority of the rulers in the local bodies are recruited from among the educated classes. The list of items shown above could be intelligently exploited by the educated classes provided that

they are rural minded and not, as at present, predominantly urban minded. In fact all the unfavourable comments upon the working out of the local bodies may be said to be primarily due to this gap between the outlook of the villagers and the 'rulers.' The Panchayats will be largely recruited from the educated classes because if all the educated return to their own places they are bound to participate in the panchayat of their village. But this is a big 'if' and until that happens we will have to remain satisfied with what little could be done under the circumstances.

Of the various problems before the panchayats in respect of rural economy there is perhaps none that is more pressing than that of rural indebtedness. What is the way in which the panchayats could serve as solvents of this huge obligation? The obligation is enormous. The Central Banking Enquiry Committee has estimated that the total rural indebtedness in India is about Rs. 900 crores. The Indian Year Book for the year 1941-42 states that this sum has been further increased during the past years. We need not go to the authorities for this knowledge. The face of almost every villager tells the tale more effectively than any estimated figures of rural indebtedness could do. The problem is threatening to be a vicious circle. Man burdened by debt and land burdened by man—that, in effect, is the broad fact of Indian rural economy to-day. We have already seen how the panchayats could initiate planned programmes in respect of consolidating holdings as economic units of co-operative cultivation. The same kind of dispensation could be made by the panchayats in regard to the question of effecting the solvency of the villagers. There is already a considerable body of valuable experience which is available for this purpose. The co-operative movement has been working in thousands of villages to-day, and the path for the panchayats is clear. The panchayats should pool their moral credit and secure through it the material credit which the co-operative societies are able to offer. It is common knowledge that most of the existing credit societies do not find the best means of investing their capital. The panchayats could come forward with the necessary moral credit to ensure the smooth flow of credit and security on the part of the villagers. In fact the co-operative societies have been for some time launching schemes of rural reorganisation as soon as they found that they could not effectively function with the existing state of the rural population in respect of illiteracy and wasteful social customs. In other words these societies have taken upon themselves some of those functions for which the panchayats are consti-

tuted, namely, propaganda, education, training, marketing and arrangement for the consolidation of holdings. The last item, for example, was successfully started in the Punjab in 1920. "The procedure adopted in establishing a "Co-operative Consolidation of Holdings Society," we are told, "is to call together all persons directly interested in land in a given village, persuade them to accept the bye-laws whereby a majority in a general meeting might approve a method of repartition, and then carry out actual adjustment of fields and holdings in such a manner that no single individual might have any grievance."

The fact that such movements arise in apparently unrelated bodies shows the place of panchayats in rural economy. The panchayats could be made to shoulder the responsibility of initiating all such movements as are directly related to the reconstruction of rural economy. Furthermore the panchayats should exercise complete control over the consumption of rural credit obtained by the villagers through the agencies of the co-operative societies or through the local money-lenders. This is one of the most important functions of the panchayat in as much as, apart from the caste panchayats, there is no other check on the villager which could make him maintain a sense of proportion in his habits of expenditure over items of a thriftless nature. As is well known, credit is a curse when it is invested in unremunerative channels. If we analyse the average annual budget of an Indian villager we find that there are several items of expenditure which are perpetual liabilities to him and from the burden of which he is almost crushed throughout his life. Principal E. D. Lucas, writing in his valuable book, *The Economic Life a Panjab Village*, (a publication of the Civil and Military Gazette) observes :

"The majority of the villagers are unthrifty. (He is writing of a village named Kabirpur). It might be said that the villager spends a great deal foolishly on social ceremonies....These ceremonies were in the nature of Guild ceremonies in medieval Europe. It is true that they would have now outlived their usefulness, had the villager been educated in our modern sense, but his social and religious outlook is still the same, and so he still naturally practises the same economy."

A similar story is told of a South Indian Village by N. S. Subramanian, M.A., in his *Survey of a South Indian Village*, a brief but suggestive study conducted in details which are interesting and instructive.

"Of the net total income," he writes, "more than two-thirds goes out of the village by way of land revenue and excise taxes, interest charges and rents to non-resident owners. The increasing costs of litigation, money squandered by some on vices and the natural toll of civilization take away a fair portion of what remains for the consumption of the village."

The two examples quoted above, one from the North and the other from the South, might be taken as fairly representative instances of thousands of villages all over India. At any rate it is common knowledge that the Indian villager lives in a context of social and economic laws which are medieval and which do not fit in with the changing factors of modern civilization. The Panchayats bid fair to be the only hope for bettering the lot of the rural population. In the matter of prudential checks which the panchayats could effectively exercise over the unthrifty villager it is instructive to note that the lead should be given by the members of the panchayats themselves. The value of examples is decidedly better than that of precepts and the economies thus effected would go a long way in diminishing the indebtedness of the villagers. Since the panchayats are in intimate contact with the daily life of the constituents it would be easy for them to devise such prudential checks as would tend to maintain a sense of proportion in the utilisation of the credit which the co-operative societies and other units place at the disposal of the villagers.

One other serious drain on the economy of rural life is the chronic waste of money through litigation for petty causes and personal rivalries. The amount of time and money and energy involved in the countless forms of civil and criminal litigation is so enormous that there are instances where the parties have become veritable bankrupts in their misdirected zeal to win some petty point of personal vanity. The professional lawyer is sometimes unjustly criticised for taking up these cases but the criticism is beside the point, human nature being what it is. Here again the reform has to come from within and not from without. The panchayats are in a position to exercise their salutory authority over these wasteful practices of vain litigations. They should decide these disputes between the villagers and should see that the parties do not proceed to the law courts which, thanks to modern means of transport and communication, are perilously near the peasants. It is assumed, of course, that the panchayats have plenary powers in the adjudication of such matters. Except in cases of serious miscarriage of justice the decisions of the panchayats should be final and binding. The trouble about the law courts is that the judges could not be in the possession of local knowledge in respect of the litigants and so they could not be the best persons to decide the disputes of the villagers. This apart, the dislocation caused by the frequent journeys to the courts and the mutual ill will which such proceedings are likely to engender are serious factors affecting the all too slender economic

resources of the villagers. It was probably on account of this that Bernard Shaw once remarked that he hated law because of his love of justice!

That such local settlements of disputes as arrived at by the panchayats are still in existence is evidenced by the reports of many responsible Government officials. The learned author of *Village Government in British India*, John Matthai, quotes several instances of such cases in one of which he cites the report of the Collector of Tanjore in Madras who said in explanation of a fall in the institution of regular suits among villagers that there was a tendency among the rural population "to settle their disputes without resorting to any tribunal." Commenting upon the objections and apprehensions of Sir Henry Maine who thought that the revival of these village panchayats would bring back with it a tide of 'barbarism', the same author continues:

> "They (the Panchayats) merely trusted to their native wit, to experience, to a shrewd sense of passing events, to a fleeting memory of what their fathers did. They were plain men of the world unsophisticated by much education, who, inspite of frequent failures, tried by whatever means lay in their power to heal quarrels and make peace, and knew by bitter experience how good a thing it was for brethren to dwell together in unity. That the revival of such an institution should bring back with it any fixed system of revolting ideas is incomprehensible."

It is obvious that if the panchayats are to act as solvents of rural indebtedness no mean part of which is directly caused by vexatious litigation they should follow the footsteps of the older systems of local settlement of rural disputes. It is one of the profoundest ironies of our national life that while the villagers are described as extremely conservative in their outlook, which is true, their conservatism does not seem to be apparent in holding on to what is best in their past. A wise conservatism, needless to say, will be fruitful if the villagers are guided by the panchayats to discard the outworn customs of the past and retain what is vital and good. The economy effected by the check of wasteful litigation will certainly be a contribution of far reaching importance in the present condition of the villagers. It should, however, be remembered in this connection that the panchayats should be free from the cumbersome machinery of the usual law courts in ministering to which indeed the parties to a suit invariably incur the heaviest expenditure. The panchayats, in other words, should dispense justice in the cheapest possible manner. It should no longer be possible, as Principal Lucas wittily observes, for judgement to be dependent upon the length of the villager's purse.

The field of rural economy is a vast one and it would be inapt to include in the present essay anything like a detailed

survey of its ramifications. Public health touches our present subject at an important point. Rural efficiency is ultimately grounded upon the health of the rural communities and therefore the panchayats will necessarily come to bear a large responsibility of maintaining the health of the villagers which is also their wealth. No doubt the rural worker spending the major part of his life in sunshine and shower is in a better state of health than his urban compatriot. But the condition of his surroundings in the village is far from being attractive. Here again the move has been made by some of the co-operative societies towards undertaking the sanitary improvements of rural areas. A recent conference of co-operative societies in the Madras Presidency passed the following resolution :

> "It is the opinion of this Conference that Local Boards should make use of the agency of co-operative societies for improving village sanitation and village communication."

It is significant that at so many points the co-operative movement should come to touch the functions of what was formerly the village panchayat. A comparative study of this movement and that of the panchayats would reveal the intimate relation that obtains between rural economy and the panchayats. It is enough for our purpose to note here that the panchayats have to take over the several functions that are now fragmentarily dispensed by the various bodies in rural areas.

Finally we have to consider the question of rural education in its relation to the problem of rural economy. What is the role that the panchayats should play in this connection ? This is an important aspect of rural economy because the frightful waste of human endeavour and energy involved in the villager's method of labour is a serious drain upon his scanty resources. We are not here considering the question of mere literacy although it is an important one. What is needed in the education of the rural population is a training in industrial economy. The average agriculturist, we are told, works for 156 days of 10 hours in the year. In the rest of the period he has no remunerative occupations. We can well imagine the potential wealth which this forced 'leisure' in the life of the average villager lays waste. The panchayats could start the revival of cottage industries which would supplement the material resources of the villagers. They should invite the assistance of the co-operative societies which would facilitate the marketing and shopping of these cottage products. The villagers should be taught to observe the economy of time in their daily habits of labour. In a world which, for better or worse, has accepted the motto of speed

and efficiency the villager is to-day an anachronism. Henry Ford in his *Autobiography* gives an accurate and instructive analysis of the sort of waste I am trying to illustrate in the life of the villager.

"The farmer," he says, "makes too complex an affair of his daily work. I believe that the average farmer puts to a really useful purpose only about five percent of the energy that he spends....A farmer doing his chores will walk up and down a rickety ladder a dozen times. He will carry water for years instead of putting in a few lengths of pipe. His whole idea, when there is extra work to do, is to hire extra men....Farm products at their highest are lower than they ought to be. It is waste motion....waste effort..that makes farm prices high and profits low."

That is an accurate piece of reasoning which is worth pondering over. It is clear, therefore, in what direction the training and education of the villager should be. Literacy by itself will not help the villager. He needs education in respect of utilising the means at his disposal towards the end at which he aims—which is the essence of all economy. The panchayats will have to organise night schools and adult classes in which the principles of economic labour and efficiency should be taught. Once the villager is made aware of his waste he will not be slow to pick up the habit. Another fact of importance is for the villager to discard caste prejudices which hamper the adoption of certain occupations and services. He should be made to realise that work is worship. In the existing context of his ideas the villager is reluctant to adopt certain occupations on account of customary prejudices even though he has enough time on his hand during a long period in the year. Time and efficiency and the equality of all labour are the broad principles which should be made the groundwork of the villager's education. It is on these and similar lines that the panchayats should initiate the step towards adult education in the villages.

In the preceding paragraphs we have reviewed the functions and features of the panchayats in their relation to the factors of rural economy as they obtain in our country to-day. These functions were once fully dispensed by the village panchayats which constituted the only possible units of local administration in the rural areas. Many factors not the least of which is the system of modern transport and communication contributed to the self-sufficiency of rural areas in the past. That was why the villages of the past remained unaffected by the fate and fortune of the ruling dynasties. An Indian saying has it that whatever kings may rule the task of grinding the corn is perennial to the peasant. To-day, however, willy nilly the villagers are brought into intimate contact with the

outer world. They are here like fish out of water because the context of their ideas is essentially different from the context of modern ideas. Hence, if it is not an over simplification, their backwardness and material poverty.

The task before the panchayats, assuming their plenary power over the village life, is to revitalise the village life and to bring it to a stage where it will play its part in the economy of the whole country. There can be no doubt that the task is a Promethean endeavour. But there is no need to despair because in one form or another the corporate life of the village is functioning everywhere. These manifestations of corporate life are at present fragmentary and ill-adjusted. They need to be brought together under their proper units of local administration. The place of panchayats is to be judged in relation to their ability to organise sporadic endeavour and enthusiasm and to pool them in the building up of the rural units of the country. It is a happy sign of the times that increasing attention is being directed towards the betterment of rural life. The various experiments conducted by farsighted men in the field of rural reorganisation are fit though few. In the Punjab the lead has been given by statesmen like the late Sir Ganga Ram whose pioneer work in the line has been instrumental in bringing a "Harvest from the Desert." In other parts of India, too, the contribution towards rural upliftment has not been negligible. Devotees of the panchayat movement like Mr. N. S. Paranjpe in the Central Provinces and Mr. P. C. Dutta in Assam and Rao Saheb Uttamarao Patil have done pioneer work in the revitalising of rural life. We might reasonably hope that the work will progress uninterruptedly in the present and future alike.

In one point at any rate India may be said to be in a better state than England. With us there is no question of rural depopulation. If anything the villagers are being over-populated. This is no doubt a quantitative blessing. Our problem is to turn it into a qualitative blessing as well. There lies the place of the Panchayats in rural reconstruction. F. G. Thomas in his book, *The Changing Village,* (an essay on Rural Reconstruction in England) remarks :

"A Rural Civilization is not possible unless there is reason to believe that a reorganised rural economy would sustain the cost of such development....Rural Development Schemes have so often been associated with Utopias, fantastic schemes for living, uneconomic proposals and philanthropic efforts, that business minds regard with suspicion any proposed rural development. Public utility societies may build a garden city here or there but it is not likely that they will be the means of repopulating rural areas. Ways and means must be found of financing rural development, either as a national charge or by attracting capital for investment in rural areas. The former of

these is not a matter of immediate politics, and moreover, the experience of totalitarian states has shown the many difficulties inherent in any state scheme of rural economy."

I think that this experience would lead us to look for help in other directions. I suppose that capital for investment in rural development might be attracted by making such schemes realistic and business like. In the vast army of our educated youths we have among us to-day sufficient human material to cope with any scheme of nation-building. This has to be done from the bottom and the rural units are the base from which we have to proceed. The work of the Panchayats is to facilitate in this building. We have defined the limits which the panchayats are by their constitution compelled to work within. Their place as promoters of rural economy is precisely in the sound adjustment of local means, in men, material and services to local ends. Broadly stated this adjustment has two aspects. One is of a negative kind and assumes the nature of prudential checks over the unremunerative habits and ways of the villagers. This, as we saw, refers to the problem of rural indebtedness the causes of which are mainly seen in the unproductive investment of credit. By acting as the conscience of the village community the panchayats will be dispensing justice and peace. They will thus reduce to a minimum the frightful waste of money and time involved in vexatious litigation and expenditure on outworn social and religious customs. The other adjustment is of a positive and constructive nature. In this the panchayats will be concerned with the task of pooling the material resources of the village and directing them to fruitful methods of co-operative or collective farming. They have here a wide experience to profit from. This is available from the co-operative societies and such movements as the Consolidation of Holdings Society successfully initiated in the Punjab in 1920 and followed in the other provinces. These activities of the panchayats will be supplemented by their educational and sanitary functions which are also discussed above. Thus the place of panchayats in rural economy in India is both of a positive and of a negative type.

In conclusion it should also be observed that the economy effected by the introduction of panchayats in the vast number of villages cannot but be considerable when we remember that the work done by the panchayats is a labour of love. The pay of officials and rulers is the bugbear of Indian administration. Since we assume that the panchayats will be recruited from local talent and since each member of the panchayat will necessarily be a constituent of the unit it is easy to see how the services of the panchayat could be made voluntary. This

material economy apart, there will be the advantage accruing from the wisdom and experience of the retiring members of the panchayats who will be remaining on the spot and will serve as moral guides for the panchayats. Thus the panchayats will be in a position to effect considerable economy in the moral and material life of rural areas.

We are living to-day in the midst of a world crisis. The outbreak of peace, as some one remarked, is fraught with as much significance as that of war. The Indian village has survived many a catasrophe in its long and apparently uneventful history. There is no reason to suppose that it may not do so and respond to the present crisis as it has done in the past. The panchayats will be the torch-bearers of Indian rural civilization. Their task is in the main that of a moral and spiritual leadership. They are the only true democracies that have ever existed and will ever exist. In their case the government of the people, by the people and by the people is no mere rhetorical description. When the load of indebtedness has been lifted off, as one interested in the problem remarks, the villager's shoulders, and his mind awakened to the meaning of the things around him, we may well hope that the Indian villager may develop a new desire to make his personality, however feeble and broken, enter in some positive way into the government of his little world. Let us hope that the panchayats will preserve that spirit of true democracy for which the world is fighting to-day. The rural people belong to that class of persons whom Aldous Huxley in his *Ends and Means* calls men of short-range interests. The panchayats, to adapt Huxley's words, with short-range, small-scale interests can find scope for their kind of political abilities in self-governing groups within an industry, within a producer and consumer co-operative, within the administrative machinery of the parish, borough or county. By means of comparatively small changes in the existing systems of local and professional organization it would be possible to make almost every individual a member of some self-governing group. In this way the curse of merely passive obedience could be got rid of, the vice of political indolence cured and the advantages of responsible and active freedom brought to all. That is a consummation devoutly to be wished and let us hope the panchayats will in time to come bring it about.

World-War and Its Only Cure—World Order and World-Religion—by Dr. BHAGWAN DAS, M.A., D.Litt., Benares, 1941. Rs. 2/4/-.

In this book Dr. Bhagavan Das appears as a modern Manu, a new Grotius who, seeing a fratricidal world and social anarchy roundabout, visualises a new world order and a new world religion which will bring the golden age of perpetual peace for mankind. A number of leading thinkers, statesmen and organised groups are advocating different systems of world order and world ethics to cure the present misery and conflict in the world Dr. Bhagavan Das examines their utterances and panaceas and shows their weakness or failure in solving the present ills of mankind. His main criticism against them is that they are vague, incomplete and partial. He does not believe in the racial, credal, or other partial solutions offered by them. He wants to base his solution on a sound understanding of human nature and its varieties and complexes. His main suggestion is that there are four types of men in the world psycho-physically. They are marked off from one another, by the predominance of one quality and subordination of others. All possible types of men and their professions and occupations are broadly classifiable under these four types. In short, it is Manu's Varna-āshrama social order that he advocates and explains in its pristine purity as a panacea for world ills. Its main sociological principle is, that of "divide, specialise and arrange according to rank" and not "mobilise, level and unite, indiscriminately, It deals with humanity as a whole and not with the interests of a particular race, religion or country. It takes into account the qualities, characters, work and circumstances of men. Society is "to get from each individual according to his best general and special abilities and to give to each according to that person's general and special needs." This will remove conflict, competition and discontent within society. State will be there as an ultimate residual, deciding and compelling authority (inhering in society). It will not wither away. Its compelling function will be reduced to a minimum. The government he proposes is to be a *aristo-democracy* where only good and wise laws will be made by good and wise legislators. He wants such a type of world-authority and also advocates a world-religion—the essential religion which is the common core of all the current great religions. It postulates a supreme power which is the very principle of all life and consciousness which is all-pervading, all-causing, all-knowing etc. Everything moves according to its will. It is the force behind history and nature, behind good life and bad life. Men cannot go against it.

We are all agreed on the need of a world order—that is—a new socio-economic and political organisation and a world religion or ethics for satisfying our spiritual and moral life. But differences arise as to how they are to be brought about and what are to be their actual contents and what aspects are to be emphasized. This will largely depend on the reading of human history and the understanding of human psychology. Unfortunately in both these matters both historians and psychologists differ among themselves widely and vehemently. Some say that the world has progressed by conflict, some say by co-operation, others by both methods. Some say that the contents of the final world civilisation should be based on economic equality, some on political equality, others on spiritual brotherhood and so on. Now whose reading, historical, psychological, sociological is true? This is our present difficulty, Historical course is not unilinear. It is plural. All methods and contents are found there. We cannot definitely say that humanity has progressed towards freedom, co-operation, equality, brotherhood by following only this course or that. Hence our difficulty lies to-day in accepting only one

interpretation of human history, sociology and psychology. That interpretation would be nearer the truth which recognises and gives scope for different human ways and methods of life.

We don't think therefore that only a round-table conference and agreement of great men can create a new world order or a world religion. This method has failed in the past. It would fail in the future, though it is a peaceful and civilised method. Force cannot be eliminated. Only education of the public mind with regard to the new order and new religion will not help. Force will have to be used to impose, if not to maintain, the new order. Force and order are correlated. For any order force is necessary, because men and groups are bound to differ, and rebel against that order or religion. Man is not a purely rational, spiritual or utilitarian animal. There are other heterodox elements in his nature to satisfy which he will fight. He will often succeed also. If we examine the growth of larger homogeneous territorial units (both political and religious) in the world it will be found they were brought about primarily by force or under the pressure of force. Most of the modern nations and large territorial and religious units were created chiefly by force and by a set of common laws and government imposed on the people. It is not merely the imposition of one religion that has maintained people in unity and common loyalty. Political force has been often necessary. The example of Khilafat or Christendom is to the point. No round-table conferences or their symbolical religious heads coulld keep them politically together or prevent them from internecine conflicts and separatist loyalties and adventures. Our question is then, is there to-day a humanity existing and united in thought, ambition and interests at all without thepresence or use of force? It is easy to talk of world or human unity or common religion. Does it at all exist in the current thought or mind of men of action, powerful groups or nations of today? They have all still to be forced and educated to it by imposition and compulsion. Then perhaps a new feelng of human neighbourhood and brotherhood and of common human interests and ideals would be created, as was done in the transition from smaller feudal to larger nation-states, but only confined to those areas. Force had to be used to unite the small tribal and feudal kingdoms into large nation-states.

Our real difficulty lies in this that active personalities, men and groups of action do not believe in a better world for mankind irrespective of their own creeds, races and communities. These militant men and selfish groups want to impose their systems on others. Hence it is difficult to do away with wars and imperialisms created by them. Will they be amazed or ashamed at their own deeds and ambitions, or even ideals? We donot see to-day any nation or people really fighting or working for any high principle of human freedom or progress. They are all fighting either for their existence and security of possessions and vested interests, or for new conquests of territory and power, whatever their professions and declarations may be. When the world is controlled by such evil powers and forces how is the poor philosopher or humanist or human scientist going to persuade these hypocrites and tyrants and to make them agree to their new schemes, however definite and detailed, grand and noble, of a new world order and impose them on the whole mankind?

Dr. Bhagwan Das suggests that Providence may move the hearts of the belligerents, or they may listen to leaders like Mahatma Gandhi. Both these beliefs are belied by the present course of events. Both God and Gandhi have been set aside. This means no active force which counts in the present conflict is willing to come under their influence or receive their guidance.

S. V. PUNTAMBEKAR

The Early Aryans in Gujarat—by K. M. MUNSHI, B.A., LL.B. Thakkar Vassanji Madhavaji Lectures of the Bombay University, 1941; Published by the University of Bombay. Price not stated.

Ever since the beginning of his career, literature and research have been as much engaging the attention of Mr. K.M. Munshi as politics and social reform. In the present series of lectures Mr. Munshi elaborates a theme which he had touched upon in a short article in the *Indian Antiquary* about 20 years ago. The lectures undertake the admittedly difficult task of giving an account of the entry and achievements of the Aryans in Gujarat in prehistoric times. The main thesis of Mr. Munshi is as follows:—The Bhṛigus and the Haihayas were Aryans of 'the outer band' who had entered India much earlier than the Aryans of 'the inner band', who were mainly the authors of the Vedic literature. The Bhṛigus were closely associated with the Śaryātas, who were the first Aryan tribe to occupy Gujarat. Children of Śaryāta, Ānarta, Revā and Revata have given their names to northern Gujarat, the Narmadā and the mount Raivata respectively. The Haihayas were the eastern neighbours of the Bhṛigus and the Śaryātas were occupying the territories between the Betva and the Jumna and often carried their victorious arms right up to Benares. Later on there arose a conflict between the Bhṛigus and the Haihayas, the battles of which were fought in Gujarat. The famous Battle of Ten Kings mentioned in the Ṛigveda is also connected with this conflict.

Most of this history is based upon the accounts preserved in the Purāṇas, which were given their present form several millenniums after these events narrated in them. We cannot be therefore absolutely certain about them; but there is no other material to reconstruct the history of the period. It is rather interesting to note that the same Mr. Munshi, who in his first lecture finds fault with Mr. Pargiter for attaching undue historical value to Purāṇas and maintains that their tradition and genealogies can yield a somewhat reliable record only if the Vedic literature is made to supply the necessary correctives, (p. 6), should proceed in his second lecture to reconstruct the history of the Haihayas entirely on the evidence of the Purāṇas though the Ṛigveda is all silent about it. We have no quarrel with Mr. Munshi for doing so; he could not have reconstructed the history of the Aryans in early Gujarat, if he had stuck to the above view advanced in the first lecture. In reconstructing the history of prehistoric times, we think that we should no longer start with the assumption of the reliability or the worthlessness either of the Pauranic or the Vedic tradition. The genealogical lists of pre-Bhārata war kings preserved in Purāṇas must in all probability have suffered in some places from the carelessness of the scribe or the inadvertence of the bard. The Vedic literature is admittedly not historical and so could not have preserved more than about five percent incidents of contemporary history. In his presidential address, Archaic Section, Indian History Congress, Calcutta, the present reviewer has shown how the pre-Bharata war dynasties really refer to the Vedic period and how there are at least 20 cases, where important incidents in the Pauranic tradition are unexpectedly confirmed by the Vedic literature. We should therefore follow the method actually followed by Mr. Munshi in these lectures, i.e. to say, we should examine both the Pauranic and Vedic evidence, put it to the test of historical criticism and follow such conclusions as can be legitimately drawn. If the two traditions confirm each other, the incidents should be accepted as history. But even if there is no such confirmation, we may tentatively assume the incidents as historical, if otherwise there is nothing against our doing so.

Mr. Munshi holds that the Mahābhārata war was not a historical incident. He however says, 'This is rather a bold inference and I would not be sorry if

further examination reveals that I am mistaken' (p. 102). We beg to differ from Mr. Munshi in this matter. If Purāṇas are absolutely certain about any incident, it is the Mahābhārata war. They divide their 'past' from their 'present' from the 6th descendant of Yudhishṭhira and when determining the time of the rise of the Nanda dynasty, they state the years elapsed between Parīkshit and the coronation of Nanda. Mr. Munshi's view that Purāṇas are relaiable when they describe the achievements of Janamejaya Pārikshita but altogether unreliable when they refer to his grandfather Arjuna is rather difficult to understand. The question is however too complicated to be discussed here.

We would congratulate Mr. Munshi for his stimulating and thought provoking lectures, which undoubtedly break quite fresh ground in ancient Indian history. We trust that he will find further time to continue his researches and extend our knowledge of ancient history.

A. S. ALTEKAR

Jainism and Karnaṭaka Culture—by S. R. SHARMA, M.A., Professor of History, Willingdon College, Sangli. Karnataka Historical Society, Silver Jubilee Publication Series No. 1, Published by its Secretary, Dharwar, 1940. Pages xix+218 and 14 plates. Price Rs. 5/-.

In this valuable book Prof. Sharma gives us an account of the history of Jainism in Karnataka from early times to modern days and discusses its contributions to Karnataka culture. Chapter I is historical and narrates the vicissitudes of Jainism under different dynasties. The author has utilised all epigraphical and literary data for this purpose and given us a strictly impartial account. He does not commit the mistake of confusing patrons of Jainism with the devout followers of that religion ; for in ancient India kings were usually catholic and extended their patronage to all sects and religions. Nor does he give undue weight to vague stories of persecution of Jainism by kings like Vishṇuvardhana. There is a tradition to the effect that this king after his conversion from Jainism to Vaishnavism, got the followers of his former faith pounded into oil mills. Prof. Sharma refers to epigraphical evidence showing how this king made grants to Jain teachers even after his conversion and how he expressed his gratitude to the Jain Guru Pārśvanātha for getting a son. He has accepted the reviewer's view that Amoghvarsha I followed both Jainism and Hinduism. Chapter II discusses the contribution of Jainism to Literature, Art and Architecture of Karnataka. The treatment is satisfactory as far as it goes ; it would have however brought out the importance of the contributions of Jainism in these fields better, if the author had compared the contributions of Hinduism and Lingayat sect with those of Jainism. Chapter III deals with Jainism as it was when it was introduced in Karnataka and as it became in the course of time. It also discusses the causes of the decline of the religion in Karnataka. Mutual quarrels and jealousies, assimilation of the Hindu scheme of life, adoption of popular practices altogether inconsistent with the gospel of *Ahimsā*, and the rise of the Lingayat sect which weaned away the trading classes from Jainism which were its backbone, are, according to the author, the main causes of the decline of Jainism. It may be added that Hinduism also adopted several Jain practices in order to absorb that religion. It eschewed sacrifices involving slaughter, held up vegeterianism for veneration and did not stand in the way of its followers worshipping at Jain shrines if they liked. Its theism and Bhakti doctrine eventually turned scales in its favours. The book is a well written and well documented work and will be found useful for all students of Jainism and of Karnataka history and Culture.

A. S. ALTEKAR

Marriage and Family in Mysore—by M. N. SHRINIVAS, M.A., LL.B., Research Fellow in Sociology, University of Bombay. Pages 218. Published by New Book Company, Bombay 1; 1942. Price Rs. 7/8/-.

Aśvalāyana, while writing about the marriage rituals and ceremonies, observes that these vary remarkably from place to place and that he will be describing only the common elements in them. The truth of this observation is well known to every student of sociology and is forcibly brought out by works like those under review, which seek to give a picture of social practices as they actually prevail in modern times. Very few people in northern India know that the bride and the bridegroom have first to 'be released from prison' before they can be married or that effigies representing ancestors have to be kept in the pandal in order to enable them to participate in the marriage function. The book thus gives considerable interesting information not to be derived from Dharmaśāstra works. Its utility will have been increased if the author had tried to show which of the customs he describes can be traced to the sacred law and which not. If he had done this, he may have come to the conclusion that 'the release from prison' above referred to is a practice that prevailed in the Vedic times, had gone out of vogue in the Smṛiti period but was revived later by the custodians of popular religion. The book is however useful as far as it goes; it is based upon a careful collection of valuable information derived from local enquiry and ethnological works. It gives detailed information about the prevalence of the bride qnd bridegroom price, exogamy, endogamy and other restrictions, rituals in Brahman and non-Brahman communities, puberty rites, practice of divorce, temple dedication of girls, etc. It is interesting to notice how the desire to look more respectable in society has recently induced a number of castes and sub-castes to introduce early marriages and *gotra* exogamy and to prohibit widow marriages and burials. The book is a careful and painstaking work and helps us to understand the actual state of affairs about marriage and family in Mysore.

A. S. ALTEKAR

Goethe's Poems—Selected by James BOYD. Basil Blackwell, Oxford. Pp. xi-212, Price 6*s*.

Basil Blackwell, the well known Oxford publisher, is to be congratulated for having brought this handy volume of a selection of Goethe's poems in these hard times when it is impossible to get books directly from Germany. The selection has been made by a well known scholar of German, who is actually Taylor Professor of German Language and Literature in the University of Oxford. That a selection made by such a competent schalar shall be highly satisfactory, is beyond question.

The author has followed the chronological order in the selection of the poems. He has chosen one hundred and thirty poems covering the entire period of Goethe's poetical activity from 1756 down to the end of his life in 1832. There is one great advantage in this chronological selection—we can follow at every step the growth and metamorphosis of the poet's mind, the gradual mastery of the art from the first tentative pieces down to the most finished poems of full maturity. It is a fascinating study to perceive the different phases through which a master-mind has passed. Such a chronological selection always enables the student to have the right perspective from the very beginning.

Goethe is one of the greatest lyrists of the world and his lyrical genius is well reflected in the poems selected, though it must be admitted that we miss some of the shorter but most charming compositions. I sadly feel the

exclusion of lyrics like "Erster Verlust", "Wonne der Wehmuth" "Trost in Tränen" and a few others, but perhaps the reasons of space compelled the author to limit his number and allowance must also be made for difference in taste.

Goethe's lyrics are intimately connected with the events of his life. To a friend of his he once said: "I have never affected anything in poetry. I have never uttered anything which I have not experienced, and which has not urged me on to production. I have composed love-songs when I loved. How could I write songs of hatred without hating?" We feel the truth of this statement in many of the poems under review, whether they come from his youth or from ripe old age. It is really remarkable how this extraordinary man could keep up the freshness of imagination and mind upto the very last day of his life. His *Faust* was not completed till very near the end of his career, and many of his lyrics written in the declining period of life shine in the glow of youth. I am thinking in this connection especially of the poems of *Westöstlicher Divan,* from which a few specimens have been inserted in the present chrestomathy. These poems reveal to us how even in the chilling effect of years he could carry a primrose-like heart. Referring to these poems he wrote in a letter to Zelter: It is a kind of poetry which suits my age, my habits of thinking, my views, my experience and which at the same time allows me to be as mad in love-subjects as youth always is. But the nature of Goethe can not be resolved into simple elements. Side by side with passion, sensations and nervous excitability we find in him moods of profoundest calmness, of Olypian dignity and aloofness, of harmonious equilibrium when he probed deeply into the mystery of existence. Many of the poems in the present selection faithfully mirror this aspect of his character.

The publication of the present selection at a time when the nations of the world are up in arms to cut each other's throat, seems to me to be of symbolic significance. Goethe is one of those rare spirits who could pierce through national prejudices and see the boander humanity. He was one of the first men to speak of world literature and world society, a society based on better principles than was attempted by the League of Nations. Art unites, religion and politics divide. Goethe taught by his life and practice that the true binding force for humanity is art. The publication under review is a recognition of this truth. It shows that we can preserve our mutual friendship, respect and understanding through art, even when mass-massacre is going on for political interests.

The book is intended for students of German but the necessary critical apparatus is lacking in it. The editor has, however, promised to bring about a companion volume of notes, which will enhance the utility of the present volume.

The editor has appended, in the contents, the date of each poem after its name. Some of the dates, as given by him, are, however, at variance with what we find in other authoritative anthologies. For example, the date for *Amor als Landschaftmaler* is given as 1787, whereas Atkins and Kastner, in their edition of Goethe's poems, say Goethe composed this poem in the beginning of the year 1788, though the motive of the poem goes back to September or October of 1787. 1777 is stated to be the date of another poem *An den Mond,* but both in Atkins and Kastner's anthology and in Buchheim's *Deutsche Lyrik,* the date given is 1778. Other variations are to be found in the dates of the poems N. 26, 50, 51, 68, 91 of the collection. Perhaps we shall find the authars' justifications for these differences in his companion volume of Notes, when that comes out.

P. N. Roy

The Knowledge of Southern India possessed by Arab Geographers—by Dr. S. M. HUSAYN NAINAR, Ph.D. Published by the Madras University, 1942.

Our knowledge of the geography of Ancient India is derived both from indigenous as well as foreign sources. Among the latter the pioneers were the Greeks followed by the Chinese who have greatly enriched our knowledge of the geography of our country from the ancient times down to the 7th century A.D. Thereafter the Arab travellers and merchants take up the thread and provide us with a continued account of the geography, social life and economic conditions of the country from the 8th to the 14th century. While there have been several very able studies of the Greek and Chinese sources, no systematic study of the Arabic sources bearing on these topics has so far appeared. Dr. Nainar's book is therefore particularly welcome as it breaks new ground and deals with a subject which had hitherto remained almost untouched. The author has devoted much industry on the preparation of his monograph and accomplished his task with great ability and sound judgment. He has made a thorough and exhaustive use of all the available Arab sources.

The book comprises a classified account of the geography, religious, social and economic conditions, natural products and other kindred topics concerning the India of that period as given by the Arab geographers. The most baffling part of an undertaking like the present work is the identification of names of things, places and persons mainly because their form becomes greatly corrupted in transliteration and also because they are incorrectly given in many cases. The author has taken pains to identify these, but in this respect he might have succeeded in identifying several more places had he referred to the *Imperial Gazetteer of India* and similar other works which he does not appear to have made full use of. For instance, Saimur was the old name of the present port of *Chowl* on the western coast, but Dr. Nainar has not identified it.

The chapter on ethnology contains a most enlightening and interesting description of the religious, social and economic conditions chiefly of southern India during that period. The author takes care to point out the limitations of the Arab writers, arising from their narrow religions outlook and parochialism, besides the fact that their accounts refer principally to the coastal towns of India and Ceylon. We are, however, in a position to infer that the conditions prevailing on the coasts could not have been very different from those prevailing in the interior of the country.

The references of the Arab geographers bear on a large variety of subjects, such as dress, ornaments, and food of the people, their habits, character and customs, their beliefs, etc., etc., although these accounts are not always correct. They, however, afford testimony about certain important matters such as the disappearance of Budhism from India which is evident from the complete absence of any reference to it. The prevalence of trial by ordeals, idol-worship rampant all over, the horrid custom of several hundred men burning themselves alive with the dead body of their king, and a host of similar superstitions throw a flood of light on the mental and cultural state of society of that age. At the same time it is also borne out that the extreme severity of punishment for thefts had made the country perfectly safe from any such miscreants. Moreover the people were generally vegetarians and free from the vices of drinking and the women did not observe purda.

A very interesting information afforded by these writers is that the Arabs did not come to India with a missionary zeal. There were no conversions and the Arab merchants were treated with honour and respect by the Hindus and their rulers who provided for them all facilities.

The last chapter on the products of the country also gives much interesting information. Dr. Nainar's book is thus a very valuable contribution to a new branch of study of Indian History and deserves an excellent reception.

Department af History P. SARAN
13-12-1942

Journal of the Numismatic Society of India, Benares ; *Journal of the Society of Chemical Industries*, 1941-42 ; *Transaction of the Indian Ceramics Society*, Benares ; *Uttarā* a popular Bengali monthly, Benares.

India is rather poor in periodical publications, more so in spacialized and technical ones. It is however gratifying to note that in recent years there has been genuine endeavour for improvement in this direction everywhere in the country, inspite of growing difficulties as to paper and printing. Benares, the traditional seat of learning and culture, has naturally played an important part. In the course of the last half a century Benares has given birth to nearly fifty periodicals, comprising popular and specialized journals, in tho country's classical and modern languages as also in English. Most of the earlier ones have of course died. Excepting the cosmopolitan city of Calcutta there is hardly any place other than Benares that has produced a similar variety of periodical publications in the country.

Of specialized journals we had *The Journal of the Benares Mathematical Society* nearly twenty five years back. *Journal of the Numismatic Socicty of India* appearing in recent years has been playing its part admirably. The Numismatic Society has got a many as 150 members on its rolls, running from 1911 to 1942, and has found its Patron in the illustrious Maharana of Udaipur. The Society's *Journal* has completed three volumes by December 1941. Edited by Dr. A. S. ALTEKAR and Mr. R. G. GYANI, it gives useful and illustrated contributions from various scholars in the country, and is not only well conducted but is nicely printed on art paper, at the local Tārā Printing Works.

A more recent addition to the list of technical journals is *Transactions of the Indian Ceramics Society*. Two issues have appeared the current on, being dated April 1942. The Indian Ceramics Society was started about two years back under the auspices of the Department of Ceramics, Benares Hindu University. It has 49 members on its rolls in 1942. Already two Sections have been formed, one in Benares, the other in Bangalore.. The Transactions give all necessary imformation, besides a number of illustrated papers of professional and educative importance. The President of the Society is Mr. M.M. SUR of the Sur Enamelling Works, Calcutta, and the Vice-Presidents are Prof. Dr. N.N. GODBOLE (Principal, College of Technology, B. H. U.) Pt. VISHNU DUTTA (Ganga Glass Works, Balawali) and Mr. R. D. CHANDORKAR (Vijoy Glass Works, Bombay). The Honorery Secretary is Prof. H. N. ROY (Head of the Ceramics Department, B. H. U.) who is also the Managing Editor of the *Transactions*. The Journal is a great credit to its sponsons.

Uttarā is a popular Bengali monthly running for over sixteen years. The present editors are Prof. Dr. Radhakamal Mukherji of Lucknow and Sri Suresh Chakravarti of Benares. The last Puja issue contained among others a faithful description of the working of the Benares Hindu University in the course of a highly illustrated contribution. In a previous issue the veteran philosopher Dr. Bhagavan Das had his paper on the future planning of human society. A special feature of *Uttarā* is its occasional review of literary progress made in the field of Indian literature other than Bengali. The journal has kept up a standard which is creditable to the conductors, and we congratulate

them on their success in continuing the work in these days of scarcity of paper and other printing materials.

G-T.

Studies on Some Concepts of Alamkāra—by V. RAGHAVAN, M.A., Ph.D. Adyar Library Series No. 33. Pages 312. Price Rs. 4/-.

The present work can claim to be a masterpiece of Dr. V. RAGHAVAN, M.A., Ph.D. He has dealt with some fundamental concepts of Poetics, in this book.

The history of Alamkāra Śāstra has its beginning in the Purāṇas and is on progress down to the present day. But it is a remarkable phenomenon in the Sanskrit literature, that in every system of thought "the quest of soul" has been the guiding principle in the development of that system. The quest of soul appears to be an ingrained spirit of the Indian mind, and thus in literature as in philosophy, this question gave rise to a lot of controversy. What could possibly be the soul of Kāvya ? After Bharata, every Ālamkārika wrote, keeping this question deliberately in view. Thus, one after another, Alamkāra, Vakrokti, Rīti, Guṇa were asserted as the soul of Kāvya. At last, came the culmination of the search for truth and Dhvani, nay, a particular type of Dhvani, namely Rasa which philosophy considered as its *Summum Bonum*, was emphasised as the highest truth in Kāvya. This truth was already revealed to Bharata, but its exact nature as being the soul of Kāvya was established first by Ānandavardhana in his Dhvanyāloka. It was conceived at an earlier period as a sort of peculiar charm, and later on, from vagueness it was brought to glory, being identified with the "Absolute"—the Brahman of the Upaniṣads ; for, the Upaniṣads themselves asserted Rasa as the ultimate reality. This revelation of truth was established on a firm footing by the great pandit Jagannāth of the eighteenth century, who, by means of his logical precision, transformed theories into truth.

In Vyākaraṇa also, sublime approach to this Absolute is simply startling. The grammarians began with the analysis of sentence, but in the rigour of their analysis landed, into a mystic realm of sphoṭa, the Śabda-Brahman, the Nāda of the Tāntrikas and at last Bhartṛhari inculcated the truth of identifying sphoṭa with Brahman.

Thus we find that divergent systems of Indian thought converged into the acknowldgement of that ultimate truth—the Brahman of the Upaniṣads.

To return to the point. When Rasa was discovered as the soul of Kāvya, Alamkāra, Guṇa, Rīti &c. formerly regarded as the soul, came to be relegated to a status Subsidiary to that of Rasas which, again, controlled the world of literature as Brahman controls the phenomenal world. The tumult of quest ceased and an undisturbed peace reigned in the realisation of the truth—Raso vai sah.

The history of those boistrous days when the search for truth was raging with all its fury, when controversy was the order of the day, when ambition for preponderence was in the sway, when the place of advancement was sometimes usurped by fantastic monstrosities of dialectician's cudgel, when truth was gleaming through the labyrinth of theories and speculations—is very well written by the author. His clarification of some of the fundamental concepts is very exhaustive. He has recorded, as a clever historian, the details of those days of past—the speculations of our forefathers, the fervour of their spirit, their creative genius, the strength of their conviction, the sanity of their approach, their susceptibility to innovations, as well as their shortcomings—their bias, their dogmatism, their zeal for controversy, their prejudice and the last, and the least, their idyosyncrasies.

Writing a history consisting of these fundamental facts calls for Herculian labour, sober and disinterested mind, precision of judgement, analytic as well as synthetic faculty, aptitude for systematisation, first hand information of their theories, when the writers are no more, when their biography is too scanty to fill up the gaps, when materials are available mostly in Sanskrit which, for historical reasons, has changed its form and colour, the vital spark having been extinguished long ago.

All this the present author has shown himself to possess. He deserves fully the credit of making up a full-fledged biography of literature in its intellectual aspect, and his enterprise is crowned with success. It is my firm conviction that books of this type will arouse a special impulse in those who desire to serve Sanskrit by unearthing the treasures hidden in it.

S. Bhattacharya, m.a., Nyayacharya

Vedānta-paribhāṣā—by S. S. Suryanarayana Sastri, m.a., b.sc. (Oxon.), Barrister-at-Law, Adyar Library Series No. 34. Pages 218. Price Rs. 2/-.

Vedānta-paribhāṣa is a very popular handbook on Advita Vedānta. It is a compact treatise dealing with Pramāṇa, Prameya and Phala, in three sections. After the epoch-making orientation brought about by Āchārya Śankara in the Vedānta system, it branched off into two sub-schools. The older school was represented by Vivaraṇāchārya and his followers, while the modern school was represented by Vāchaspati and others. The two designations, older school' and 'modern school' are sometimes misleading. In the present case, these two sub-schools arose within a period of a century and a half only, as in the case of the schools of Pūrva-Mīmamsā.

The author of *Vedāntaparibhāṣa* was a great logician and no wonder. He was born in an era when Navya-Nyāya reigned, in all its pride of subtlety and close reasoning, over the whole range of Sanskrit literature. At that time, the only means of being recoganised as a great Naiyāyika was to write a commentary on Tattwachintamani, refuting the views of predecessors. So Dharmarāja was led to write a commentary on that famous book of Gangeśa, the father of Navya-Nyāya, where he refuted as many previous commentators as ten. In writing the present book, he drew upon the sub-schools of Adwita-Vedanta, but arranged and represented the kernel of Adwita philosophy in terse and complicated style characteristic of Navya Nyāya. Thus the book though so comprehensive in matter has become a bit difficult on account of its style.

The merits of the present work of being an unrivalled epitome of Adwita Vedanta system, were recognised by oriental as well as English students and that is why so many editions of it have been brought into existence. But the edition which Prof. Sastri has brought to the public, repays more than a careful consideration. The edition is immensely useful to the English student who, generally with lesser equipment of Sanskrit knowledge derived from traditional mode of study, have to go through the book.

It is endowed with an introduction bearing upon things of topical interest. At the end, critical notes have been appended where Prof. Sastri is at his best. But this is not the whole story. I wonder at the exquisitely beautiful translation of the text. It elicited admiration from no less a person than the erudite scholar of international fame, Prof. Sir S. Rādhākrishnan who speaks of it as "a readable and accurate English translation." Unhampered by any display of learning, it sets forth the subject matter in translation at once clear and close. The analysis of contents will also pave the path of students to grasp the subject in its synthetic aspect. They will not loose the thread, if they cling to it, while

exploring deeper regions of logical subtleties. The edition, is, indeed, very valuable.

S. BHATTACHARYA, M.A., NYAYACHARYA.

Ālambanaparīksha-Vṛtti—by DINNAGA with the commentary of DHARMAPALA. Edited by N. AIYASWAMI SASTRI. Adyar Library series No. 32. Pages 124. Price Rs. 3/8/-.

The present book belongs to the Yogāchāra school of Buddhism. The main pivot upon which the doctrine of this particular school revolves is that consciousness alone is true and the object which appears to come within the fold of perception is but an aspect of consciousness. When the force called Vāsanā gets matured consciousness is transformed into a form of object. Thus object has got no separate existence apart from consciousness.

This view had first been propounded by Asanga in his Vijnaptimātratāsiddhi divided into two parts Vimśikā (consisting of twenty couplets) and Trinśikā (consisting of thirty couplets) in the earlier centuries of the Christian era. But it was great Diṅnaga who through the present book gave the doctrine in a full-fledged logical garb. The name of Dinnaga looms large in the mediaeval school of Logic and his Pramāṇasamuccaya will remain a treasure in Sanskrit literature for all time to come.

The text consists of eight Couplets and Dinnaga himself has appended a brief Vṛtti to it. This Vṛtti has been explained elaborately by the famous commentator Dharmapāla. But all these things have been written in a cryptic style characteristic of the Sūtra period.

Unfortunately the original Sanskrit text with its Vritti and the commentary thereon had been lost and was available only in Tibetan and Chinese translations. But thanks to the indefatigable labour of Mr. Sastri that the text with the Vritti and its commentary has been restored to Sanskrit. The importance of this particular book is immense, for its lines have been oft-quoted by as great philosophers as Samkarāchārya. The description of Yogāchāra doctrine as is found in the orthodox philosophical schools, can be brought to clearer relief if this book, where the doctrine has been traditionally represented, is gone through.

The credit of Mr. Sastri is manifold. He has edited the book with utmost care. He has translated the text along with its Vritti and the commentary on it. The translation is characteristically lucid and enlightening and it reflects his profound grasp of Buddhistic schools of thought. He deserves fully the credit of having done a yeoman's service through this translation where abstruse passages have been dealt with ease and care. He has offered good suggestions for amendment in some obscure lines, which deserve special notice. The value of this book has been enhanced to a considerable degree by the addition of foot-notes, appendices and indexes which are of great help to the students of research. It is my firm conviction that the edition will be popular in the intellectual circle interested in Indian philosophy and will fulfil the purpose of Mr. Sastri who has been 'labouring in the cause of cultural and spiritual advancement of all living beings.'

S. BHATTACHARYA, M.A., NYAYACHARYA

Annual Bibliography of Indian History and Indology, Vol. 2 for 1939 and Vol. 1 for 1938; both by BRAZ A. FERNANDEZ (Bombay Historical Society, Bombay; V. 2, published 1941, demy 8, pp. 24+192 pages, Rs. 5/-; Vol. 1, published 1940 pp. 8+80, Rs. 3/-. To be had at Indiana Library Bureau, Gandhigram, Benares).

Volume 2 of the publication, distributed in 1942, gives references and short particulars of books and articles on Indian history and Indology in general, published during the year 1939. Section I of the bibliography, covering 134 pages, is arranged under sixty distinct heads, alphabetically from Anthropology to Vijayanagara ; as also two extra heads (a) General and (b) Reports and Proceedings. Other sections are (ii) Further India and Indonesia, (iii) Adjoining countries (*a*. Iran, *b*. Afghanistan and Central Asia, and *c*. Tibet), (iv) Islamic World and (v) Miscellaneous. An Author-index and a Subject-index are also appended. The preliminary portion of the volume gives a list of periodicals taken up and Publishers represented, besides a two-page Preface and an eleven-page Introduction, both of interesting and promising character.

Eighty-four periodicals are taken up, of which as many as twenty eight are foreign and the rest Indian publications, all being listed in one alphabetical order. The general admission is that the issues published in 1939 (? *for* 1939) are represented. It would have perhaps been better understood if the particular volumes or numbers taken up by the bibliography were specially mentioned in the list itself; for, there are some journals that go by volumes only and not by years ; and there are some others that are behindhand in appearance. A user of the present volumes in doubt if all the issues *for* 1939, whether published in the year 1939 or after the close of that year, (say, in 1940 or 1941), are also represented in the bibliography he consults. This point may be considered by the compiler while issuing a future volume.

As many as 1415 items are described in the second volume. The last one is numbered 1401, but there are no less than 14 additional insertions between some members. All are given in the Roman script except that occasionally some Samskrit and other Indian language-titles are given in Nāgari.

Although the volume is not free from typographical and other mistakes, it is a huge task that the very able compiler has undertaken, and scholars in the country must be grateful to him for his indefatigable labour of love. They should render all assistance to him and see that the work continues, and is able to offer even greater facilities year after year. The present issue is not only a valuable companion volume to the famous KERN INSTITUTE (Leyden, Holland) publication, *Annual Bibliography of Indian Archaeology*, issued under the editorship of Dr. VOGEL and other learned scholars of Europe, but should be found to be more useful, varied and certainly more easily accessible and yet less expensive.

No University or research Libraries in India should fail to possess a set of this useful reference tool.

The first volume of this publication was entitled "Bibliography of Indian History and Oriental Research for 1938" and was issued as a supplement to the *Journal of the Bombay Historical Society*, vol. 5, nr. 2, and was only half as much as the second, which is a distinct improvement upon the first issue. The next vol. for 1940 is, we understand, almost ready in manuscript but awaits for paper. It is advisable that instead of publishing a separate volume for 1940, now in 1943, a combined vol. for 1940, 1941 and 1942 be made ready and published as early as it is practicable in 1943. The published price of a publication, if added to an item, will certainly be greatly appreciated by users.

G-T.

A TELEGRAPH AND WIRELESS CODE FOR THE STANDARD INDIAN ALPHABET

By S. C. Guha, Editor, *Indiana*, Benares

Any visitor to the telegraph counter of a station of operation will find how a telegraphic instrument works. A minute observation will open to you the fact that only two particular sounds are produced on a telegraph instrument: (1) *tr* and (2) *tak*. These two sounds are generally represented in writing by a dot (.) and a dash (-) respectively. At the wireless instrument also the two sounds are almost the same.

A message you present to a telegraph office for transmission does never go to the desired station in the exact form or language your message is originally written in. The telegraphist has to transform your message into a series of sounds according to a prescribed code that assigns to every letter one or more of the two sounds, often in permutation and combination. In Europe the Morse Code for the Roman alphabet is one of the very first we know of.

As in the west, in India too we have to use the Roman script in presenting a message and generally to write in the English language. As the vast majority of our literate people do not know English or the Roman script, they have to take the help of a *munshi* to write for them.

Our standard Indian alphabet, written in the various scripts of the country, *viz.*, Devanāgari, Gujarāti, Bengali, Gurumukhi, Tāmil, Telugu, Kannāda, Mālayalam, etc., and also Simhalese, Burmese, Siamese, Tibetan, etc., can be used in writing messages to be presented at a counter, provided an *Indian* code is introduced for operation.

In the *Encyclopaedia Britannica** will be found the following codes for the Roman alphabet, Arabic numerals and a few notes of punctuation, etc. Two separate codes, 'International' and 'American' are given therein, both being developed on the origional Morse Code: we show them on the next page; the proposed Indian Code (given more fully, and rather scietifically, at the end of this paper) is also shown here in juxta-position:

**Vide* p. 516 of vol. 26 of the 11th edition, and p. 888 of vol. 14 of the 14th edition.

International Code		American Code			Proposed Indian Code	
A	.-	A	.-		A	(अ) - [Ā (आ) - -]
B	-...	B	-...		B	(ब) --.-
C	-.--	C	.. .		C	
CH	----	CH	*nil*		Ch	(च) .-.
D	-..	D	-..		Ḍ	(ड) -.. [D(द) -..-]
E	.	E	.	(=1 Units)	E	(=A+I)
F	..-.	F	.-.		F	(फ) --.---
G	--.	G	--.		G	(ग) .--
H	....	H	....		H	(ह) --
I	..	I	..		I	(इ) ... [Ī(ई)... ...]
J	.---	J	-.-.		J	(ज) .--.
K	-.-	K	-.-		K	(क) .-
L	.-..	L	——	(=5 Units)	L	(ल) ....-
M	--	M	--		M	(म) ...--
N	-.	N	-.		N	(न ण) ..--
O	---	O	. .		O	(=A+U)
P	.--.	P	.....		P	(प) --.
Q	--.-	Q	..-.		Q	(=K)
R	.-	R	. ..		R	(र) ..--[Ṛ(ऋ)...---]
S	...	S	...		S	(श ष स). ---
T	-	T	—	(=3 Units)	Ṭ	(ट) -. [T(त) -.-]
U	..-	U	..-		U	(उ)....[Ū(ऊ).... ....]
V	...-	V	...-		V	(व) --.-
W	.--	W	.--		W	(व) --.-
X	-..-	X	.-..		X	(ज) .--.
Y	-.--	Y	.. ..		Y	(य) .-..
Z	--..	Z	... .		Z	
1	.----	1	.--.		1	
2	..---	2	..-..		2	
3	...--	3	...-.		3	
4	....-	4	....-		4	
5	.....	5	---		5	
6	-....	6	......		6	
7	--...	7	--..		7	
8	---..	8	-....		8	
9	----.	9	-..-		9	
0	-----	0	————	(=7 Units)	0	
.	.. .. ..	.	..--..		.	
,	.-.-.-	,	.-.-		,	
;	-.-.-.	;	... ..		;	
:	---...	:	*nil*		:	
?	..--..	?	-..-.		?	
!	--..-	!	----.		!	
" "	.-..-.	" "	..-.-.		" "	
&	*nil*	&	....		&	

N.B.—For other sounds, vowel and consonant, please see the 'suggested Code for the Indian alphabet' at the end of this paper.

Same as International.

My suggestion is that the telegraphists should be required to operate upon the Indian code as a rule, instead of the 'International' and 'American' codes; and messages from the public should be accepted for transmission if presented in the script of the country or province (e.g., in Assam a message presented at a counter in Assamese, i.e. in the script used in writing the Assamese language—and in Gujarāt in Gujarāti, should in no case be disallowed). Any message written in the Roman script will however be transliterated by the telegraphist into the standard Indian alphabet, unless the sender of the message does it for himself.

If this is followed, our countrymen will not be under an obligation to write a message in a foreign language or script, and at the same time telegraphists will not be required to operate on more than one system (at least for inland service), the Indian alphabet being used for a standadized code throughout India.

With the above object in view, the following Indian Code was prepared, by the present writer in 1921. It was first presented in the course of a paper on the subject, read on August 14, 1921 (29th of Śrāvaṇa, 1328 *B.S.* or 1978 *Vikrama-Samvat*) at the 4th monthly session of the 28th year (1328 *B.S.* or April-March 1921-22) of the Vangīya Sāhitya Parishat, Calcutta. The chart of the same code was subsequently exhibited at the Exhibition of the First All-Asia Educational Conference, held in Benares on the grounds of the old Central Hindu College in December, 1930.*

The scientific character of the standard Indian alphabet is acknowledged by the philologists all the world over. The Code presented here aims at offering convenience, especially to the common literate people of the country, and may be found to be a practical one in case the standard Indian alphabet is 'Indianized' for operation, not by discarding the Roman, at least in the first instance, but by allowing it to be recognized as an alternative for practical purposes.

The suggested Code for the Indian alphabet is given below. As to the Indo-Arabic numerals and the notes of punctuation,

* *Vide* "Telegraphic Code for the Indian Scripts" by S. C. GUHA, being item 8 of the list of "Exhibits from the Bihar Vidyāpīṭha" of Patna to the First All-Asia Educational Canference, Benares, 1930, as given in the second half of the Papers and Proceedings of the Library Service Section, published under the editorship of Rai Sahib S. R. Ranganathan, M.A., L.T., F.L.A., etc., as a special issue of the journal *The South Indian Teacher*, May 1931, (vol. 4, nr. 5) pages 261-262, the first half of the Papers of Proceedings appearing previously as the Decembér, 1930, issue of the some journal.

etc., which are not shown in the following table, we can advantageously utilize either the 'International' or the 'American' system, giving the same a universal character. The sounds '*tr*' and '*tak*' are represented in the following code by the symbols "।" and "‑" respectively, instead of the Eur-American 'dot' and 'dash' as given in the 'International' and 'American' codes quoted above. A dot (.), where used, denotes a short pause.

SUGGESTED CODE FOR THE INDIAN ALPHABET

Consonants :

क	|‑	ग	|=	य	|‑||	ह	=
च	|‑|	ज	|=|	र	=||	ङ ञ म	|||=
ट	‑|	ड	‑||	ल	|||‑	न ण	||=
त	‑|‑	द	‑||‑	व	≡|	म् or*	|||‑
प	=|	ब	=|‑	श ष स	‑|||	:	=.‑
						् (हसंत)	

* The 2nd and 4th letters of the first five *vargas* of the consonants are to be formed by the addition of "‑" (the sound for हसंत) and "=" (that for ह), after a short pause. Thus, ख छ ठ थ फ and घ झ ढ ध भ will also be formed.

Vowels :

अ	|	आ	||	ए = अ + इ	
इ	|||	ई	||| |||	ऐ = अ + ए	
उ	||||	ऊ	|||| ||||	ओ = अ + उ	
ऋ	|||≡			औ = अ + ओ	

N.B.—It may not be out of place also to suggest in this connection that on similar lines a scientific system of stenography for all the Indian languages† in general may be evolved. One familiar with the western systems, such as Pitman, Gregg, Sloan-Duplexan, etc., will easily find that they had also to adopt a method more akin to the standard Indian alphabet (varna-mālā, giving the vargas of consonants and vowels arranged in a graded scale of phonetics, such as the consonat-vargas क च ट त प with their third forms as ग ज ड द ब, etc.) in their initial lessons, rather than to the Roman alphabet they follow. Pitman has *Pe Be ; Che Je ; Ṭe Ḍe ; Te De*, etc., which are exactly according to the first and third letters of the primary consonant-vargas of the Indian alphabet. "The Frame-work of [a system of] Indian Phonography, a Chart showing the Indian alphabet अ आ क ख and its Shorthand form" was also another of my exhibits to the First All-Asia Educational Conference in 1930, *vide* item 2 of the list of Exhibits from the Bihar Vidyāpītha, on p. 261 of Part 2 of the Papers and Proceedings of Library Service Section, published as a special issue (May 1931) of *The South Indian Teacher*, an educational monthly journal from Madras.

† We have already some systems for Hindi, Urdu, Bengali, etc. It is however time now to examine how far they are likely to be of use for all time.